INSIDE: WHY IT'S OKAY TO HUNT SAGE-GROUSE

# Montana Outdoors

MONTANA FISH, WILDLIFE & PARKS | $3.50

SEPTEMBER–OCTOBER 2016

## MULE DEER

How do we know when to increase the harvest?

IN THIS ISSUE:

PRE-DAWN JITTERS

THE BEST PHONE CALL?

RICK BASS'S PERFECT ELK HUNT

WHAT YOU NEED TO KNOW ABOUT SHOULDER SEASONS

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***MONTANA OUTDOORS* MAGAZINE**
**VOLUME 47, NUMBER 5**
For address changes or other subscription information call
**800-678-6668**

*Montana Outdoors* (ISSN 0027-0016) is published bimonthly by Montana Fish, Wildlife & Parks. Subscription rates are $12 for one year, $20 for two years, and $27 for three years. (Please add $3 per year for Canadian subscriptions. All other foreign subscriptions, airmail only, are $48 for one year.) Individual copies and back issues cost $4.50 each (includes postage). Although *Montana Outdoors* is copyrighted, permission to reprint articles is available by writing our office or phoning us at (406) 495-3257. All correspondence should be addressed to: *Montana Outdoors*, Montana Fish, Wildlife & Parks, 930 West Custer Avenue, P.O. Box 200701, Helena, MT 59620-0701. E-mail: **montanaoutdoors@mt.gov**. Website address is **fwp.mt.gov/mtoutdoors**.


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**Postmaster:** Send address changes to *Montana Outdoors*, Montana Fish, Wildlife & Parks, P.O. Box 200701, Helena, MT 59620-0701. Preferred periodicals postage paid at Helena, MT 59601, and additional mailing offices.

# Montana Outdoors

SEPTEMBER-OCTOBER 2016

## FEATURES

**10 A Shot Worth Taking**
Why Montana still allows sage-grouse hunting. *By Ben Pierce.*

**12 The Perfect Day**
The good news, I told myself, is I get to keep hunting. *By Rick Bass. Illustrations by Stan Fellows.*

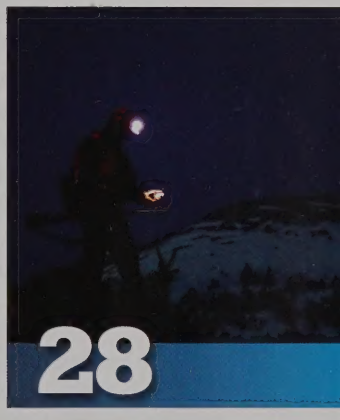
**18 Buffalo Gal** A heavy heart is lightened by gratitude during a once-in-a-lifetime hunt. *By Ben Pierce*

**20 Monitoring Muleys** How FWP figures out mule deer population trends and harvest recommendations, and why biologists say now is the time to issue more B licenses in southeastern Montana. *By Tom Dickson*

**28 Coming Through Darkness**
Essay. *By Gabriel Furshong*

**30 Q&A: Shoulder Season Basics** What hunters and landowners need to know about FWP's unprecedented attempt to reduce extremely overabundant elk populations in 43 Montana hunting districts. *By Montana Fish, Wildlife & Parks*

**34 "No, I'm Not Kidding!"** When hunters get this phone call, it might be news they've been waiting for their entire lives. *By Ron Aasheim*




## DEPARTMENTS

**2 LETTERS**

**3 EATING THE OUTDOORS** Great Game Gumbo

**4 OUR POINT OF VIEW** Three Essential Points About the New Shoulder Seasons

**5 FWP AT WORK** Jason Mullen, Fisheries Biologist, Great Falls

**6 SNAPSHOT**

**8 OUTDOORS REPORT**

**36 THE BACK PORCH** Prepare (Again) to be Humbled

**37 OUTDOORS PORTRAIT** Antelope Bitterbrush

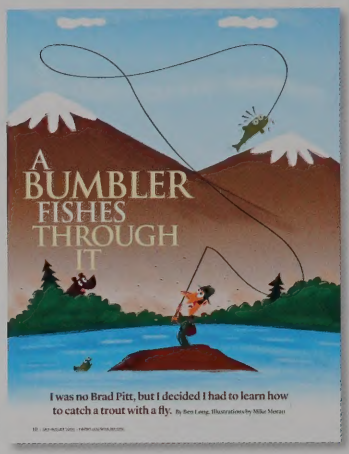
**STURDY BIRD**
If sage-grouse are in trouble, why does FWP still allow them to be hunted? Find out on page 10. Photo by garykramer.net.

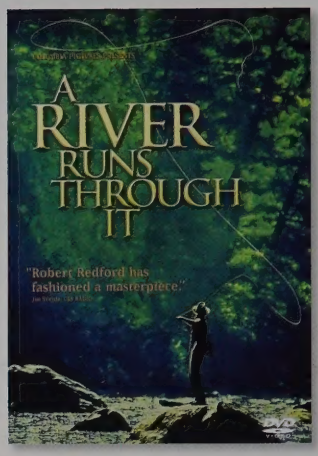
**FRONT COVER**
Mule deer are doing great in some parts of Montana, not so great in others. Find out why on page 20. Photo by Mary Ann McDonald.

### Artist's interpretation

I had to laugh at your essay "A Bumbler Fishes Through It" (July-August 2016). Ben Long is spot-on with his descriptions of how hard it can be to catch a trout with all that fly-fishing paraphernalia. Now I'm off to buy my own tenkara rod. One question: Is it my imagination or does the artwork resemble the poster for the movie, *A River Runs Through It*?

Derek Montgomery
*Madison, WI*




### Awkward experience

My wife and I thoroughly enjoyed the hilarious essay "A Bumbler Fishes Through It." Whenever we visit a fly shop in Montana, we can relate to his expression: "I feel like I don't know the secret handshake." We also have found it best not to say we're from California.

Bob Christensen
*Orange, CA*

I very much agree with your essay on "adult-onset" fly-fishing. I'm relatively new to this state, and I find the whole fly-fishing thing to be intimidating, although I want to learn how. It seems like it's the Montana thing to do in the summer. Fly-fishing stores could do a better job of making themselves more inviting to people like me who are just starting out. If you don't feel welcome in a fishing store, why not shop online?

T. Michael Carlson
*Billings*

### Hunters helping raptors

Your excellent article in the July-August issue on baling twine and ospreys ("Deadly Decoration") and the news item on the hazards to birds from monofilament line inspired me to write.

Now that Montana's hunting season is upon us, many people incorrectly assume that raptor conservation and hunters are at odds. At Montana Raptor Conservation Center, we couldn't rehabilitate injured birds of prey for return to the wild without the help of hunters.

Each year, generous hunters share their game meat so that we can provide a healthy, diverse, and natural diet to our patients—and the 10 education birds that live at the center because they would not survive in the wild.

> Hunters are also our eyes and ears in the field. They report birds in trouble—often birds we may not have known about otherwise.

Hunters are also our eyes and ears in the field. They report birds in trouble—often raptors we may not have known about otherwise. For instance, Warren Johnson, owner of Hell's-A-Roarin' Outfitters, noticed an injured golden eagle far in the backcountry of the Absaroka Mountains. With permission from the FWP game warden, Warren managed to rope the eagle and bring her out on horseback. The story was chronicled in the September-October 2015 issue of *Bugle*, the Rocky Mountain Elk Foundation's magazine, as a testament to great hunter ethics.

Importantly, hunters share our appreciation of raptors. It's nearly impossible to be in the woods and not pause to watch a hawk soar or marvel at the construction of a massive bald eagle nest. Warren told us that he "respects the eagle as much as the elk," and that admiration is a critical component in cultivating integrity toward the outdoors in generations to come.

When we conduct community education programs, we meet many people who share Warren's enthusiasm for nature, whether they experience the outdoors on skis, on horseback, or while wearing hiking boots with a rifle slung over their shoulder. Outdoor ethics is essential to Montana's lands, wildlife, and heritage.

I urge your hunting readers and anyone else who spends time outdoors to add our phone number (406-585-1211) to their contacts list so they can call us to report an injured raptor or donate surplus game meat.

Becky Kean, Director
*Montana Raptor Conservation Center*
*Bozeman*

### Warning birds of cats

I just read Bruce Auchly's "The Last Thing Birds Need" essay from last year on the problem with free-ranging cats killing birds (July-August 2015). Thank you for running that. If your readers are interested in reducing the predation problem, here are some tips:

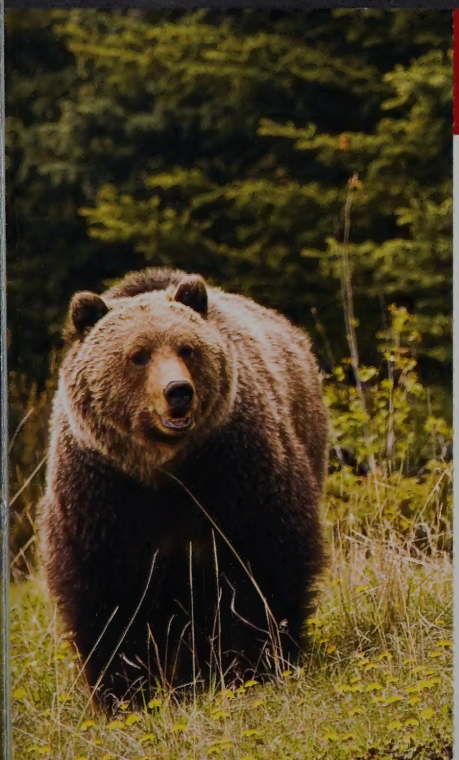
Just telling people to keep their cat indoors will be a non-starter for most rural families. Many ranchers and farmers consider their cats to be "barn" cats that belong outside in the barn, where they keep mouse and other rodent numbers down. One alternate method of preventing predation is to have the cat wear a brightly colored harness or collar. Birds have excellent color vision, so a pink, red, yellow, or bright green collar could greatly improve the chances of a cat being spotted before it has the chance to pounce. Another option is to put a bell on the collar so birds will know when the cat is near. These methods are certainly not foolproof, and cats will probably always kill birds, but these simple steps can help minimize the problem.

Hilary A. Turner
*Bozeman*

### Speak your mind

*We welcome all your comments, questions, and letters to the editor. We'll edit letters as needed for accuracy, style, and length.*

*Write to us at* Montana Outdoors, *P.O. Box 200701, Helena, MT 59620-0701. Or e-mail us at: tdickson@mt. gov.* ■



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# Great Game Gumbo

By Tom Dickson | Preparation time: 45 minutes | Cooking time: 1 to 3 hours | Serves 12–16

## INGREDIENTS

- 1 c. plus 3 T. vegetable oil
- 1¼ c. flour
- 2 lbs. chicken breasts or thighs, cut up
- 1–2 lbs. duck or goose breast meat or venison rump, cut into chunks
- Creole seasoning
- 1 lb. andouille sausage
- 2 yellow onions, chopped
- 3 green bell peppers, chopped
- 5 ribs celery, chopped
- 3 T. minced garlic
- 3 bay leaves
- 8 c. chicken stock
- 2 lbs. frozen shrimp, thawed and shelled
- 1 can clams with juice (optional)
- 2 cans corn (optional)
- ¼ c. filé powder

## DIRECTIONS

ROUX: Heat 1 cup of oil in a large pot over medium heat for 10 minutes. Stir in flour and stir for another 15 minutes or so until it turns the color of dark peanut butter. Keep stirring the entire time; otherwise the roux will burn—as indicated by black specks—and you'll have to start over. Note that the roux continues cooking for several minutes off the heat.

GUMBO: Liberally sprinkle chicken and game with Creole seasoning. In a large skillet, heat 3 T. oil over medium-high heat. Sauté meat in batches, then brown the sausage. Remove.

Sauté vegetables in remaining fat, scraping the pan bottom to loosen the delicious fond (brown bits). Add meat, bay leaves, and another 1 T. of Creole seasoning. If using tender game meat (venison loin or rump or game bird or waterfowl breasts), add mixture along with chicken stock to the large roux pot. Bring to a boil, then reduce heat and simmer 45 minutes.* Skim off fat and add shrimp, clams, and corn. Cook another 10 minutes. Stir in filé powder to thicken. Serve in bowls over rice.

*If using tough game meat (venison shank, shoulder, or neck or game bird thighs), simmer for a total of about 3 hours. ■

Though technically it's still summer, hunting season is well under way in much of Montana. Many archery pronghorn and shoulder season elk hunters have already notched their tags, and grouse hunters will be on the prairies and in the mountains within the next few weeks. Waterfowl opener is only a month away.

It's time for hunters to use up any game remaining in their freezer to make room for this year's harvest. One way is with a big pot of fragrant, savory gumbo.

Gumbo is a thick stew combining meat, shrimp, a flavored stock, and the Cajun "holy trinity" of vegetables: celery, bell peppers, and onions. Developed in southern Louisiana during the 18th century, gumbo is thickened by a delicious "roux" (rue)—flour and fat (usually vegetable oil) cooked together slowly—as well as filé (fee-lay) powder (ground, dried sassafras leaves), found in most Montana grocery stores.

This basic-but-delicious recipe is for not-so-tough game meat, like duck or goose breasts or venison rump (the sweet, tender loin is best used for sautéing and grilling, not stewing). If using tough game cuts like venison shoulder, shanks, or neck meat or duck or goose thighs, you'll need to simmer the gumbo for about two additional hours to break down the strong connective tissue.

Game isn't the only meat in my gumbo. I also throw in chicken, spicy andouille sausage, and shrimp. I also add a can of clams, with juice, to give it a stronger seafood taste, and occasionally a can or two of corn for sweetness and color.

Gumbo freezes well. This recipe makes six quarts. My wife and I eat one quart the first night and freeze the rest in one-quart containers for later in the year when the temperature drops and we start to crave this meat-rich southern stew.

*—Tom Dickson is editor of* Montana Outdoors.

SHUTTERSTOCK

# Three essential points about the new shoulder seasons

This year FWP has begun something unprecedented in the history of Montana elk management. We've added "shoulder seasons" to the general firearms rifle season in 43 of the state's 138 hunting districts.

Shoulder seasons are firearms seasons outside the regular five-week season, mostly restricted to private land. They will add as much as five months to the general season, starting as early as August 15 in many of the targeted hunting districts and ending as late as February 15.

Use of shoulder seasons is unprecedented because never before has Montana found itself with so many elk. Statewide, the population has grown from about 65,000 in the 1990s to roughly 165,000 today. In some hunting districts, elk numbers are five to even ten times greater than what landowners will tolerate. Overabundant elk herds knock down fences, eat haystacks, and graze pasture intended for livestock. It can be a real hardship.

FWP had no feasible choice but to establish shoulder seasons. By law, we are required to manage elk populations within objectives.

Over the next few months you'll see and hear a lot about shoulder seasons on TV news, in newspapers, and on the FWP website. Amid all that information, I'd like you to remember three important points.

One is that shoulder seasons are a management tool, one we hope will address a problem that has been growing for more than a decade. Elk numbers in many areas have mushroomed, mainly because of mild winters and more private land becoming elk "refuges" as increasing numbers of landowners cease to allow public hunting. Hunting is the main way Montana keeps elk populations at healthy levels. Without access to private land, where a growing number of elk now reside, hunters can't help control populations.

In the early 2000s, citing landowner concerns, the Montana Legislature passed HB42, which requires FWP to bring overabundant elk populations down to "objectives"—previously established levels based on the biological carrying capacity of the land, landowner tolerance, and hunter interests. Also, Governor Steve Bullock has mandated that FWP "step up its efforts to work with affected landowners to mitigate [elk] impacts and allow for greater elk harvest and public opportunity."

Over the past decade we've tried to accomplish this, mainly by issuing more B (cow elk) licenses during the general five-week season and holding game damage and management season hunts. But in most cases, those measures have not succeeded as hoped.

So in 2014, I established an internal working group of 25 FWP biologists, game wardens, and regional supervisors. I asked them to develop a management tool that would reduce elk numbers in problem areas while addressing concerns by some hunters that landowners who lease to private outfitters don't allow public hunting.

The shoulder season concept stood out as the option with the best chance of succeeding on all fronts. Key to its success, however, will be cooperation. More landowners will need to open their gates. Hunters will need to contact landowners and hunt hard. Our staff will need to closely monitor harvest and help landowners and hunters find elk.

The second main point I want to stress is that shoulder seasons are a great opportunity for hunters. In some hunting districts, hunters will now have up to six months to harvest a cow elk. And because shoulder seasons take place on private land only, that hunting pressure should move more elk onto public land during the archery and general firearms seasons.

Third, I want hunters to know that FWP had no feasible choice but to establish shoulder seasons. By law, we are required to manage elk populations within objectives. A few critics have denounced shoulder seasons, but they have not come up with other workable solutions. Making entire hunting districts antlerless-only during the general season is not something hunters or landowners would tolerate. It would take away the opportunity of harvesting a bull, and it wouldn't address the fact that cow elk aren't in many huntable areas during the five-week season.

Montanans would also reject issuing landowners kill permits to remove elk themselves. And department culling—as a few people have proposed—would treat elk like vermin.

Despite the complexities, Montana's elk situation is, in a way, very simple. Many landowners want overabundant elk removed, and many hunters want to harvest an elk. All we have to do is put the two together. That's what we aim to accomplish with shoulder seasons, by giving hunters enough time to find elk so they can reduce populations to legal, tolerable levels.

—**M. Jeff Hagener**, Montana Fish, Wildlife & Parks Director

*For more information on shoulder seasons, see page 30 of this issue and visit the FWP website at fwp.mt.gov.*

MONTANA FWP

CHRIS MCGOWAN

# TROUT TABULATOR

**JASON MULLEN**
Fisheries Biologist, Great Falls

**This photo was taken last October** on the Missouri River about seven miles upstream from Craig near the Wolf Creek Bridge. That's me at the helm of the boat and my fisheries technician, Dylan Owensby, on the bow deck with the net. We're night electrofishing to get an annual population estimate for rainbow trout. We also do a spring survey in this stretch for brown trout, and conduct similar surveys each year farther downstream in the Pelican Point area with help from NorthWestern Energy biologists.

FWP has compiled population data for these stretches of the Missouri dating to 1982. One thing we can see in that extensive data set is how the population has remained well above the long-term average of 3,300 trout per mile in recent years. Steadier flows coming from Holter Dam over the past few decades is the main reason for much of that increase.

These surveys take all night, from dusk to dawn. We conduct them in the dark because the trout are more likely to be in the shallower water, where they are easier to survey.

Dylan and I take a lot of pride in working on this important and popular fishery. FWP recently estimated that angling on the blue-ribbon stretch of the Missouri River from Holter Dam to Cascade contributes about $54 million each year to local economies. By doing long-term population monitoring on the river, we're keeping a close watch on that valuable trout population. I feel that it's a big responsibility.

# SNAPSHOT

**JEREMIE HOLLMAN** of Kalispell was photographing the reflection of tamaracks on the surface of Lion Lake near Hungry Horse Reservoir last October when he looked at the spot where he had set his camera equipment. "I'd been focusing on landscape shots," he says. "But what ended up really catching my eye was this leaf, and the organic textures of the rock, the lichen, and especially the water drops. A shot like this is what you get when you look closely. It's like when you're a kid, and everything in the woods is cool and exciting. You can still find that beauty in just about everything if you slow down and start looking closely at nature." ■

**1,000**

Age, in years, of some of the giant cedars in the Ross Creek Cedars Scenic Area southwest of Libby.

## Sprague's pipit not warranted for ESA listing

Earlier this year the U.S. Fish & Wildlife Service removed the Sprague's pipit as a candidate for listing under the Endangered Species Act. "Listing the Sprague's pipit as an endangered or threatened species is not warranted throughout all or a significant portion of its range at this time," the agency noted in a press release.

"This is a positive outcome and provides for continued habitat conservation across the Prairie Pothole Region, which includes eastern Montana," says Ken McDonald, head of the FWP Wildlife Division. "Still, it's a reminder that we and all our public and private conservation partners can't let up on our efforts to learn more about grassland bird population dynamics and habitat requirements."

ENFORCEMENT

## Top 10 hunting violations

The vast majority of hunters obey Montana's hunting laws and regulations. But occasionally, some forget the law or make a bad decision and end up facing an FWP game warden and driving home with a citation. Don't be one of them. Here's a list of the top 10 violations that game wardens say they encounter every year. Cut this list out and post it where you can give it a quick review every time you head out hunting.

1. **Trespassing.** Hunters must have the landowner's permission before hunting on private property. In Montana, private land does not have to be posted for a hunter to be guilty of trespassing. Always ask first.

2. **Road shooting.** It's illegal for anyone to shoot on, from, or across a road or right-of-way (also known as the shoulder or barrow pit). The right-of-way generally lies between the fences on either side of the road.

3. **Shooting too early or too late.** Make sure of sunrise and sunset times. Big game and upland bird seasons run from one-half hour before sunrise to one-half hour after sunset. Waterfowl seasons end at sunset. Use only the sunrise-sunset tables supplied by FWP, and for the correct zone in which you are hunting, not the times in the local newspaper or on television.

4. **Improper tagging.** After killing a big game animal, a hunter must properly validate the hunting tag. That means completely cutting out the date and month on the tag. It also means thinking ahead, so you don't, for instance, put a deer tag on an elk. Excitement is no excuse.

5. **Tag transferring.** Hunters must use their own tag when shooting an animal. Transferring licenses between spouses or using another family member's tag is illegal. Nonresident hunters especially should know that even though some states allow party hunting, Montana does not.

6. **Off-road driving.** Drive only on established roads. On public land, stay on the road. On private land, drive only where the landowner says you can. Driving off a road is a sure way to make an enemy of a private landowner and could result in a ticket.

7. **Passing by check stations.** All hunters and anglers must stop at all check stations they pass, going to or coming from the field, whether they have game or not. Even if you are out fishing, you must stop at all check stations. Driving by a check station not only hurts FWP's efforts to gather data, but it is illegal and can result in a ticket.

8. **Forgetting evidence of sex.** When transporting a big game animal, evidence of the animal's sex must remain naturally attached to the carcass. The most common way is to keep the male's genitals and female's teats attached to a hindquarter. This is also required of hunters who bone their animals out in the field (known as gutless field dressing).

9. **Shooting from a vehicle.** It's both illegal, unsporting, and dangerous to shoot from a vehicle window or pickup bed.

10. **Not enough blaze orange.** For big game hunters, at least 400 square inches of hunter orange must be *visible* above the waist. Note that a daypack will substantially reduce the visible portion of the blaze orange. Although it's not required for bird hunters, FWP recommends that upland bird hunters wear at least a blaze orange hat or vest. ■

ROAD RESTRICTION
NON MOTORIZED USE WELCOME YEAR LONG
FOR WILDLIFE HABITAT SECURITY
TO PROTECT WATER QUALITY
ADMINISTRATIVE USE BY PERMIT

A hunter legally walks in to a public hunting area. Off-road driving is a common hunting season offense.

CLOCKWISE FROM TOP LEFT: CARTOON ILLUSTRATION BY MIKE MORAN; CRAIG MILLER; SHUTTERSTOCK; NABCI; DONALD M. JONES; JOHN CARLSON

WILDLIFE MANAGEMENT

# Help locate swift foxes

FWP is asking hunters to report sightings of these cat-sized foxes in northeastern Montana.

If you see a gray-red fox on the prairie that's the size of a house cat, FWP biologists want to know. It's likely a swift fox.

Swift foxes were once abundant across the Great Plains, living among bison, pronghorn, and prairie dog towns. Starting in the early 1900s, their numbers began to decline in response to large-scale government poisoning campaigns that targeted wolves, prairie dogs, and ground squirrels. The latter two are swift fox prey. The wolf decline led to an increase in coyotes and red foxes, which outcompete swift foxes.

So complete was the decline that in 1969 Montana declared the species extirpated (locally extinct).

Since the 1980s, however, a growing number of swift foxes have been sighted in eastern and central Montana. That's because of transplant programs in Saskatchewan, Alberta, and on the Blackfeet Indian Reservation, as well as the discontinuation of large-scale predator and rodent extermination programs.

Over the past 15 years, FWP has conducted three surveys of swift fox distribution in northeastern Montana. Numbers had been steadily increasing, but according to Heather Harris, FWP wildlife biologist in Glasgow, preliminary results of monitoring in 2014-15 indicate a population decrease of up to 70 percent. If confirmed by additional analysis, the decline will likely have been caused by the severe winter of 2010-11. "It would not be a big concern because swift fox populations are still healthy as indicated by strong ratios of juveniles to adult females," Harris says.

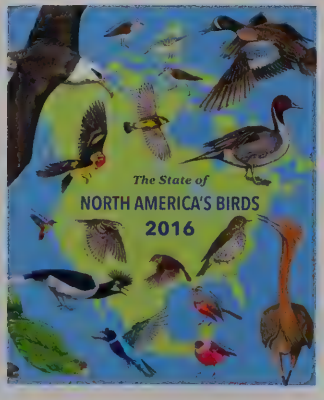
Harris says hunters and others exploring Montana's prairies can help biologists better understand populations and distribution by reporting any sightings of a live or road-killed swift fox. "A swift fox can be mistaken for a red fox, but it is smaller and has a grayer coat and a black tail tip rather than the red fox's white tail tip," says Harris. "It's also much smaller than a coyote, though it can easily be mistaken for a coyote pup."

Report sightings to Harris at (406) 228-3725, heharris@mt.gov. ■

BIRD CONSERVATION

# How are North America's birds faring?

The United States, Canada, and Mexico recently issued a report on the status of bird populations in nine key ecosystems across North America. "The State of North America's Birds 2016" was developed by the multi-agency North American Bird Conservation Initiative (NABCI) and built using information collected by tens of thousands of citizen scientists across North America.




"This report is a call to action for governments, private industry, and the public to come together to support a beloved shared resource—our migratory birds," says Judith Scarl, NABCI coordinator for the Association of Fish and Wildlife Agencies.

"The State of North America's Birds 2016" identifies deforestation in Mexico as one of the biggest problems facing many of the continent's bird populations. More than 50 boreal breeding bird species migrate to and through that country's tropical forests during winter. While 80 percent of boreal forests in Canada and the northern United States are still intact, tropical forests in Mexico suffer from dramatic deforestation. As a result, more than half of Mexican tropical forest resident bird species are on the report's Watch List of at-risk species.

Read the full report and find ideas about bird conservation at stateofthebirds.org. ■

## Steel shot works great

A study in Texas shows that steel shot is as effective as lead for dove hunting. That's encouraging news for hunters who are switching to the nontoxic shot for grouse and pheasants to reduce human consumption risks and keep lead off the landscape.

The five-year study recorded the hits and misses of 53 hunters who fired more than 5,000 shots with size 6 and 7 steel and 7½ lead shot, killing a total of 1,146 doves. The study report, published in the *Wildlife Study Bulletin*, was designed by well-known ballistics expert Tom Roster. Among the findings:

■ **Steel works.** At the end of two full seasons of shooting, the study found no difference between the number of doves killed and crippled using lead and steel ammunition. Hunters actually hit about 5 percent more doves with steel and were unable to distinguish between loads.

■ **Open chokes bag more birds.** Shooters using improved cylinder chokes, the most open pattern except for skeet, had a higher dove kill rate than shooters using modified or full choke patterns.

■ **Closer shots are far more effective.** Inside 30 yards, shooters bagged 28.4 percent of birds shot at and wounded 13.9 percent. At greater than 30 yards, they killed 15.1 percent and wounded 16.6 percent. Wounding rates at the various distances were the same with lead and steel. Poor shooting, with too tight a choke at too far a distance, "rather than unfounded excuses about the ineffectiveness of steel shot, should be our focus now," wrote *Field & Stream* shooting editor Phil Bourjaily in an article on the study. ■

# A Shot Worth Taking

## Why Montana still allows sage-grouse hunting.

By Ben Pierce

**PRAIRIE TRADITION** An upland hunter selects a single bird from a small covey of sage-grouse.

When European settlers first arrived on the Montana frontier in the mid-1800s, they found a land teeming with game. Bison, pronghorn, and enormous flocks of sage-grouse populated the prairie. The large grassland birds, which can live only where there is sagebrush, occupied most of the state's eastern half along with large tracts in southwestern Montana. Across the American West, sage-grouse once ranged over 290 million acres of sagebrush grassland.

For decades sage-grouse were shot for their meat by pioneer families. Later, recreational hunters favored the bird for its willingness to hold for a pointing dog. Hunters also enjoy hunting the handsome bird in its native sagebrush habitat.

Yet hunters and others have been seeing fewer of the large upland birds in recent decades. Largely because of habitat loss, the number of sage-grouse in the West has declined since the 1970s. The drop prompted calls for the U.S. Fish & Wildlife Service (USFWS) to list the species as threatened or endangered—a designation that would significantly affect agriculture, energy development, and hunting.

In fall 2015, the USFWS decided not to list the sage-grouse. The agency announced that, despite population declines, the species remains relatively abundant and well-distributed across much of its western range and does not face the risk of extinction.

During the years leading to the USFWS decision, studies by that agency and western states' conservation departments showed that the main threats to sage-grouse are habitat loss and fragmentation. Of particular concern in Montana is conversion of sagebrush grasslands to row crops such as wheat. Another key threat is oil and gas development, which crisscrosses the bird's habitat with roads and power lines. Though ranching and energy development dodged a bullet with the USFWS decision not to list the sage-grouse, how those practices affect the species is still under scrutiny.

Understandably, many ranchers and energy interests in turn ask why Montana Fish, Wildlife & Parks continues to allow sage-grouse hunting when state and federal agencies are so concerned about the species.

"It's a good question," says John Vore, FWP Game Management Bureau chief. "The answer is pretty simple. The effect of hunting on Montana sage-grouse is hardly even measurable. Basically, hunting has nothing to do with sage-grouse declines in Montana."

Vore notes that sage-grouse hunter numbers in Montana have dropped in recent

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CLOCKWISE FROM TOP LEFT: GARY KRAMER NET; JOEL MAES; CHUCK AND GALE ROBBINS

years, and hunter harvest now accounts for only a tiny fraction of the birds that die every year. Of 1,300 adult radio-collared birds in huntable areas of Montana between 2000 and 2016, only nine died from hunting, researchers found. "And adult birds make up only a portion of the population," Vore says. "Because reproduction rates are so high, there are also a lot of new young birds out there each fall."

Vore says the focus on sage-grouse hunting diverts attention from the big issue: habitat loss. He explains that by far the largest threat to sage-grouse populations comes not from individual mortality but rangewide reductions of sagebrush grasslands. A recent energy boom in eastern Montana and rising grain prices persuaded many ranchers to lease their lands for oil and gas development or plow sagebrush areas historically used for grazing. The development punches holes in habitat and disturbs the birds. Sage-grouse are sensitive to sound and require vast areas of sagebrush prairie to mate and nest. Development and associated infrastructure (roads, power lines, and well pads)—and the noise and habitat fragmentation that comes with them—means less habitat and, as a result, fewer birds.

"Many people don't realize how much habitat sage-grouse require," Vore says. "We need to think at the landscape scale—townships, not sections. And habitat cannot be fragmented. Converting even 10 percent of large swaths of intact sagebrush habitat to grain fields, subdivisions, or oil pads can reduce the number of sage-grouse breeding sites by 50 percent."

Though sage-grouse in Montana occupy only about half their historic range, the state still possesses large tracts of sagebrush grassland that have remained largely intact due to well-managed cattle grazing. In the mid-2000s, FWP identified "core areas" of critical sage-grouse habitat. Beginning in 2006, government programs began paying private landowners not to spray, till, or burn sagebrush habitat on their land. Those efforts have protected nearly 200,000 acres in Montana that benefit not only sage-grouse, but prairie species like mule deer, pronghorn, and other grassland birds.

Even though hunting plays only a small role in sage-grouse population dynamics, FWP still carefully manages hunting seasons. "In cases of extremely low counts, we will close hunting until populations rebound," says Vore.

By keeping the hunting season open, FWP provides recreational opportunities that connect people to the land and the birds, creating strong advocates for sage-grouse and sagebrush conservation.

Moving forward, Montana must keep a close watch on sage-grouse to ensure the bird's future on the prairie, says Vore. Farmers, ranchers, hunters, and government agencies have all pitched in, and that work has led to the healthy populations and sage-grouse hunting opportunities that Montanans and visitors enjoy today.

"Montana needs to continue managing sage-grouse the way we have been doing," Vore says. "Hunters, conservation groups, and state and federal agencies will need to keep working with landowners to help them find financially viable ways to keep sage-grouse habitat intact."

*Citing recently increased populations, the Fish and Wildlife Commission reopened areas for the 2016 season that in 2015 were closed to sage-grouse hunting, and maintained the daily bag limit of two, possession limit of four, and a one-month hunting season (September 1–30).*

**Only 9 of the 1,300 sage-grouse in the study died from sport hunting.**

**SAGE-GROUSE FAN CLUB** Below: In addition to generating revenue for sage-grouse monitoring and habitat conservation, hunting seasons create and maintain strong advocates for the prairie birds.

# The Perfect Day

## The good news, I told myself, is I get to keep hunting.

BY RICK BASS. ILLUSTRATIONS BY STAN FELLOWS

**The best hunting seasons** are not necessarily the ones in which you are fortunate enough to find an animal early in the year, or even necessarily at all. When I was young it seemed that way, but the older I get the more pleased I am at the end of a day in which I simply see new country, and perhaps get close to an animal, but do not take one, for whatever reason. Even a stumble, a mistake with the wind, or the cracking of a twig that blows out the herd doesn't upset me anymore; that's just how it goes, sometimes. I've been fortunate to kill a lot of elk over the years, so that more than ever, it's the quality of the hunt I anticipate, not the outcome. I used to hear older hunters say that kind of thing all the time, and I didn't understand what they were talking about, and wasn't sure it was something I looked forward to: becoming such an old-timer myself, and losing my obsession, and the uncomplicated way of measuring success—meat—that was so well-defined. Because I loved that equation, and the way it pulled me over and through the mountains, I did not want to let go of it, and viewed its going away or metamorphosis as a lessening.

It is not a lessening, though. It is a deepening and a widening. The pinpoint precision of the kill is no longer the focus, but everything else is still there, and richer.

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**All week I had been hunting new country**, new ridges and basins, and had been finding fresh tracks, though not the animals. I kept bumping them late in the day, and rather than pushing them too hard, I had backed off and then returned the next day. At one point I found where the elk herd had bedded down in an old abandoned hunting camp, which would have made quite a Christmas card, if I had known the old-timers who had once briefly inhabited it. I envisioned snapping a photo of the elk all arranged warm and cozy beneath the bare lodgepole frames of the tent-spars, the bulls' sweeping antlers like the spars themselves, and sending the photo to the old boys in their rest home, with a caption, Wish you were here, or, The neighborhood's not the same without you.

I may not be explaining it clearly. When I go to bed each night, knee-sprung and leg-hammered—groaning, I'm so tired and sore—that ache, that diminishment, is my gain. Someday soon I'll be like those old gone-by codgers, unable any longer to enter the territory I so love, and with the prey, always, ultimately victorious. These days, the longer I go without killing an animal, the richer my days are, for the thing I love does not end.

Still, when I cut new tracks in the fresh snow, I do not feel that way. When I come in behind them and have the wind in my favor and the elk are wandering through the woods just ahead of me, I never feel that way, and I still want them as badly as ever.

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**Some nights when you go to bed** you just have a certain feeling, a certain confidence, about the day to come. Part of it is an anticipation and excitement, but part of it is a calm. The fact that new snow had fallen the night before deepened this feeling the next morning. It wasn't so much an overconfidence as an awareness that all the conditions were right, and that it was easy to imagine things falling in place as they had in the past. I knew there were elk on the mountain, there was new snow, I was rested and had an early start, and the breeze was out of the north; I would go in from the south, walking quietly in that new snow. Best of all, the place where I was going was far enough from the road that I wasn't likely to encounter any other humans.

I drove and daydreamed, vaguely conscious of the idea that I was on one side of a dividing line—

not having meat—and that at the end of the day, driving back, I might well be on the other side. It wasn't overconfidence but instead more like the examination of possibility.

I turned up the old logging road, pleased to see no tire tracks in the new snow. The place I was going was steep and rocky and gnarly and the way there was difficult. Good choice, I thought, extending my goodwill to the seven billion humans who had chosen not to climb this particular mountain before daylight on this particular morning, you made a good decision. Stay in bed, sleep, be warm, read the paper. Enjoy your coffee.

Starting up through the forest, with every inch of new snow mine, I grinned like a kid, laughed out loud at how wonderful it—life—all is. I wish I could remember that every day of the year, but I confess to forgetting it sometimes.

I was surprised not to find them at first light in the basin where I had been seeing their sign. Maybe I had been a little overconfident. I had to decide whether to ascend to the ridge and work back downwind, back toward where I knew they sometimes bedded, or push farther on.

It was a joy, having the mountain to myself, and so much new snow. I decided to push farther on. The day was mine; why not? No other animals were moving, not even the deer—I always choose, in my excitement over fresh new snow, to conveniently forget how, in those first hours after a big snow, elk, in particular, hunker down, knowing that they are vulnerable. No matter: The farther I went, the more it would increase my chances of cutting tracks. It was the logic of exuberance. I didn't know where the elk were, but every step I took was bringing me a step closer to wherever they were.

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**Near noon, I climbed up out of the clouds** and into the yellow sunlight. I was in a stunted high-elevation lodgepole forest, up on a plateau, when I found them—or their tracks—looking as freshly laid in that deep new sunlit snow as they could possibly be. It seemed to me that the snow in the little craters of their hoofprints was still tumbling down into the wells of their prints—that the elk must be right in front of me, close enough to touch, and that somehow I simply wasn't seeing them, was looking straight through them. I could smell them, and their wandering trail bespoke an attitude of extreme leisure.

In the old days, I would have surged ahead. Here in the new days, however, I wanted to savor the moment—the butter-yellow sunlight on the new snow, the freshest tracks ever, the blue sky with its frost crystals shimmering, the perfect stillness in the woods, the solitude, and the extreme good fortune of my having slipped in downwind just behind the elk, rather than coming across a skein of tracks just a smidge upwind—and though I was eager to see what lay ahead, and very much wanted, with the familiar old intensity, to shoot an elk, I also wanted to look around and think about things a bit.

It was a big transition, to have gone from so many hours of trudging on through deep, silent snow, without seeing so much as even a squirrel, to suddenly being in the midst of the hunt, the midst of the moment. I wanted to retire all my previous daydreaming, and yet the daydreaming would not easily go away. It was a confusion of demeanors, a convergence of two entirely different rivers, and I sat on a fallen log and ate my lunch and waited for the elk to get a little farther out ahead of me.

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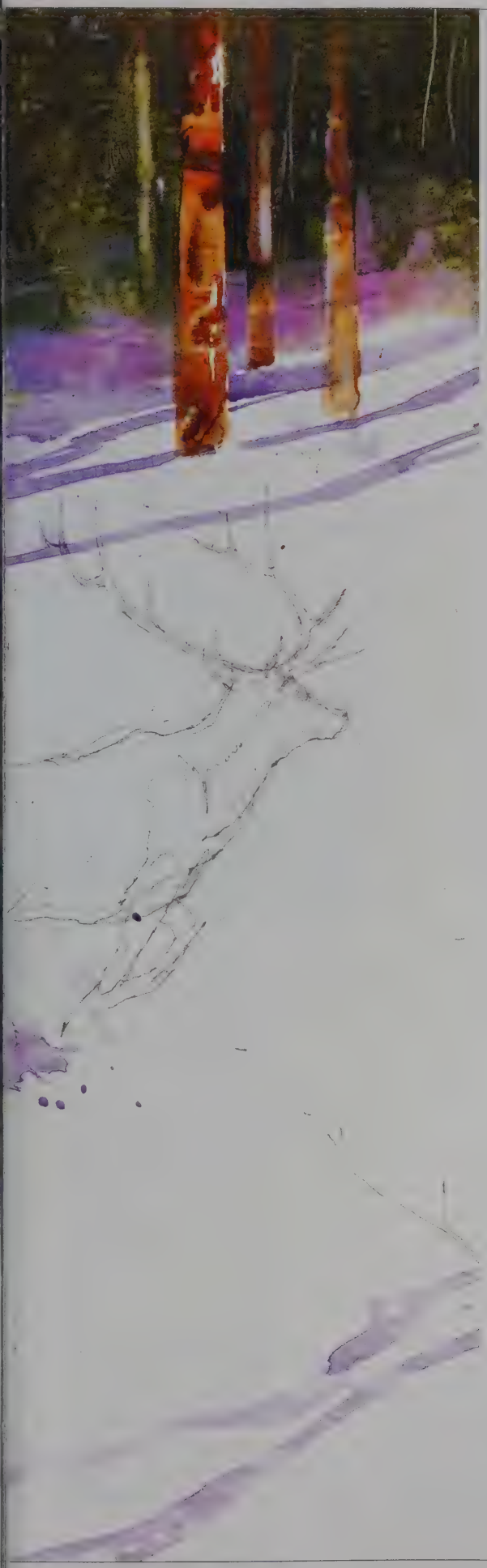

They weren't going anywhere. Where could they go? All the world was snow, and all the world was deep forest, and there had been no humans on this wayback mountain all season long.

They wandered in a braid, cows and calves and young bulls and surely at least one giant bull. Some of their tracks stepped over logs and branches and others went around them. The sunlight was beautiful; it seemed somehow like the light that might exist on another planet, with a shimmering sundog when I looked at it, and the snow so cold and dry and deep that I made no sound at all, further accentuating the idea that I was living in a dream, or another world.

With the clock ever so slowly starting to wear down on my body, I was hunting hard, intently, but savoring it. It was a perfect day: How many days are perfect? Maybe all of them; but some, I think, are more perfect than others.

**They were moving so slowly**: stopping to paw at the kinnikinnick far below as if digging or mining for buried treasure. I had never encountered a more leisurely band of elk—eight, ten animals?—and I couldn't believe they weren't right in sight. Only the density of the forest prevented me from seeing that short distance ahead, into the future, and I hunted on, as carefully as I knew how, totally immersed in an intensity of awareness of sight and sound and cautious movement. I had the wind in my favor, and the level sun behind me as it trudged slowly from east to south toward west. The only thing less than perfect about the whole set-up was how godawfully far I was from the car, but so what? I had all year to pack out. I like packing out: not getting in a hurry, just humping one big packload out after another, one a day, for days on end—a slow transition away from the dreamtime world of the hunt, and back into the routine workaday world of man.

There was lazy movement behind a tree right in front of me. A big, dark animal with a nest of antlers was nibbling at something on the other side of the tree, not ten yards in front of me, and calmly I lifted the rifle and looked through the scope and saw that the antlers were those of a mule deer, and then the deer—a big one—stepped out into the open and looked at me, standing there so very close.

The woods were filled with calm. Sometimes there are just days and moments like that, and we move from one to the next, it seems to me, as if across stepping stones in a broad and shallow river.

The mule deer was still chewing. He looked at me a long time—somehow he understood he was not in danger—and then, almost as if with resignation, he stotted off, his swagbelly swinging: the requisite escape, but maintaining his dignity at the same time.

Back following the elk, I could see that the big bull's tracks separated from the herd; he had peeled off to the north to bed in some thick timber, while the herd went to the left, and I was faced with a decision: meat or antlers? The herd would be bedded down in the patches of sun of the old larch and pine forest just ahead of me—but the big bull was closer, and I wanted to see what he looked like. About the old assertion that big bulls are tough—which they sometimes are—I wasn't worried: I have found no bull so tough that 30 days of aging won't tenderize and flavor the meat into the same exquisite taste of a younger animal.

It was like something from an elk-hunting textbook: The bull was high-stepping over logs and pushing through chest-high brush. The snow had spilled from the leaves and branches and needles as he sought to cover his backtrail in such a way that the approach of another would be audible.

When he jumped up off his bed in front of me, not 15 yards away, I thought he was a moose, he was so dark and tall. There was a clump of trees between me and him and I simply didn't have a shot. He kept those trees perfectly between us, and

all I could see was an occasional wide antler, or a patch of dark body, galloping up the hill.

I didn't think he'd seen me. I crouched and hid and watched the downwind ridge, knowing he might circle around to take a look at what had so rudely interrupted his midday rest. I waited 15 minutes, then took off after his tracks, and found where indeed he had done that, and had peered down at me and seen or scented me without my seeing him, and then bolted. I followed his tracks down the slope to where he had come barreling through the midst of his herd, spooking them, and taking all of them down the back side of the mountain, into what for me was terra incognita.

The good news, I told myself, is I get to keep hunting.

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**The bull stayed with them** for only a short distance, then must have seen or scented or heard me again, for his tracks bolted straight up the mountain, while the herd continued down.

I decided to save him for another year, and to follow the herd this time—in part because I knew an old bull like that would never let me get the drop on him, once he knew I was there, and in part because he was running ever-farther from the car, while the herd was at least for now headed back in somewhat that general direction—south, rather than east, toward where I had parked, but at least in roughly the same quadrant, the same hemisphere.

I followed them all day. They went straight down, through cliffs and rock chimneys and into little creeks, charging down slopes so steep I needed to hold onto lodgepole saplings to keep from sliding. Then they went up. I followed quietly, sidehilling, thinking they would calm down, but they never did; always, the line of their tracks was the panicked single-file exodus of fear.

It was a couple of hours before they came up out of the creek and began, ever so gradually, to ascend and spread back out, believing they had shaken me, and not even really knowing what I was, only that something had frightened the bull.

It was all new territory to me; I had a general idea of where I was, and how I would get home—with or without an elk—but every step was new, and I liked that. After a long while—another hour or more—the tracks finally began to unravel, spreading back out into a tentative wandering that soon enough grew more confident, though the elk had not stopped to feed again, but were instead still moving, passing through the same long slants of cold yellow sunlight that I was. We were on a north slope and the forest was growing colder; puffs of steam rose from my breathing.

They led me to another plateau, more densely forested than the sidehill, and I knew they had to be getting tired, and looking for a safe afternoon bedding spot. I crept up over the edge of the hill and about 20 yards in front of me saw what looked like three vertical black bars hanging beneath a leaning lodgepole. The black was the exact color of the shins of an elk, though it puzzled me that I couldn't see the animal, just those three slender shins, and I wondered why there was not a fourth.

I raised the scope and peered at the shins through the dark forest but still could see nothing else, just those three vertical black bars. I crept a little closer for a better vantage, looked again—it's got to be an elk, I told myself, even as another part of my brain told me elk have big orange-yellow bodies, tall antlers, dark eyes—and still the shins had not moved.

How odd, I thought; it must just be three trellises of moss hanging straight down. I crawled in a little closer and the shins unfolded into a tangle of elk, and then there was the herd busting loose all around me, with some animals galloping south and others north; and once again, the chase resumed, the trailing through the deep snow, the never-ending saga of failure and desire.

Half an hour later I saw the young bull moving carefully through the lodgepole and yellow light, his antlers like those of royalty—not huge, but what elk is not beautiful?—and when I fired, he dropped in the deep snow, and—except for the gutting, packing out, butchering, and wrapping—the year was over, and my gratitude for the great luck of the day was no less than it had ever been, and all the more so, for having been led by the herd into new country.

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**As I was packing out at dusk**, an immense mule deer buck—the largest I'd ever seen—blocked my path, coming up the game trail I was heading out on. It was blue twilight, still legal shooting light, and he wasn't ten yards in front of me. For long moments we beheld each other. He clearly did not want to step aside to let me pass, and doubtless smelled only the bull I had just killed. I felt that I could have reached out and touched him with the end of the rifle. The

woods were thick on either side of the trail.

Do you know what I mean if I say that his antlers were too large, and the deer himself too large, and, in the blue dusk like that, too regal, and too easy, and that my day had been already almost too perfect?

All my life, I have heard older hunters speak of such things—of letting trophy bucks pass—and now I was at that same place, as if at a threshold of something I didn't quite understand, but maybe didn't need to understand.

It just didn't feel right. I would never see a bigger mule deer but I had all the meat I needed and then some, and I had been hunting elk, not deer. Part of it might have been my advancing middle age and part of it might have been the cultural pivot of history itself—the new post-recession austerity—but in the end, a large part of it, I think, had to do with how beautiful the woods were that evening, and of how I did not want to break the quiet communion of the long pack out with the sound of a gunshot.

Reluctantly, the giant deer took a leap to the downhill side, and then high-stepped around and past me, walking, not running, as if having known all along what decision I would make during this most perfect of days in one of the most perfect seasons, and situated perfectly and halfway between who I used to be and who I was on my way to becoming.

I suppose in theory every day is like that for each of us, but that particular cold, starry evening, there on the new mountain, it felt very much that the buck had opened a gate for me, and I had made the right decision, and passed on through it, as had countless other hunters before me, in all the generations of mankind. A point where hunger yields to pleasure, and a point where enough is enough. A point when beauty matters more than ever before, and with the day's shadows, though slightly longer, ever more beautiful, ever more meaningful.

# Buffalo Gal

## A heavy heart is lightened by gratitude during a once-in-a-lifetime hunt. By Ben Pierce

The call came on New Year's Day. Christine Bailey, of Stevensville, her husband Randy, and their three children were driving to Deckard Flats near Jardine for a once-in-a-lifetime bison hunt. Over the phone, the Baileys learned that Christine's father, Thomas Craig, the man who'd taught her to shoot a rifle and field dress a deer on high-country outings near her childhood home in Flagstaff, Arizona, had just died of cardiac arrest.

Passing through Bozeman with their mules in tow and children Tanna, 9, Zachary, 7, and Brianna, 5, in the back seat, Christine and Randy weighed the situation. Thomas had suffered from Alzheimer's disease late in life, but he'd spoken with Christine about her upcoming bison hunt, and she knew he had been excited for her opportunity.

The Baileys decided there was little that could be done at that moment. And they knew something else: Thomas would have wanted them to hunt. "My father gave me the love of hunting," Christine said.

### ONCE-IN-A-LIFETIME OPPORTUNITY

Eight months earlier, on a whim, Christine had applied for a Montana bison license. While applying for moose and elk tags, she asked her husband about the bison hunt. Randy told her to go ahead and put in, but that she'd "never draw a tag." Of the more than 10,000 hunters who apply to hunt bison in Montana, only 80 or so get drawn for a license. When Christine's bison hunt packet arrived in the mail in late June, it took a while to register what happened. She read through the Montana Fish, Wildlife & Parks pamphlet three times before realizing she'd drawn a tag. "I actually took a picture of the pamphlet and the letter and put it on Facebook to share with my friends," Christine said. "We go to a church that has a lot of hunters, so there was a lot of excitement and disbelief."

To prepare for the hunt, Christine and Randy pored over maps, watched YouTube videos, and studied the extensive bison hunt information provided by FWP. The couple then contacted the department's Gardiner-area game warden, Chris Kerin, to learn about the area where they'd be hunting and what to expect. Despite its name, Deckard Flats is anything but flat, Kerin told them. The area lies just north of Yellowstone National Park and is defined by rolling hills and ravines that extend from the west flank of Buffalo Mountain.

> "Growing up with my dad and the hunting ethic he instilled in me, we use everything we kill. My husband and I are instilling that in our kids."

Experienced hunters comfortable in the backcountry, the Baileys wanted to hunt with their children, stay far from roads, and ride in on their mules. "Because Deckard Flats is a mile or two away from a road, it's a big task to pack out a bison," Kerin says. "It took a lot of thoughtfulness to pull it off the way the Baileys did. Their hunt on Deckard Flats is what I wish every bison hunter could do. They made it an event for the whole family."

### DAY OF THE HUNT

The Baileys awoke in camp on Saturday to bright sunshine. The forecast called for temperatures below freezing and blue skies, good conditions for hunting. Excitement tempered by heavy hearts over their recent loss, Christine and Randy saddled the mules and dressed the kids for a day out in the cold.

The family rode onto Deckard Flats around 9 a.m. Deer dotted the landscape, but the bison the Baileys expected to find were nowhere to be seen. Christine said a prayer. "I said to myself, 'Dad, I know you're up there. Give me something,'" she says.

At that moment the Baileys spotted a group of six bull bison moving across the flat. The family rode to a rock outcropping, where they glassed the bulls for 45 minutes. Christine and Randy picked out a big male that appeared to be the oldest of the bunch. "It was an older bull, past his prime, no longer breeding," Christine says.

Christine and Randy rode from the outcropping to get closer to the bison herd. At around 11 a.m., Christine was off her mule, prone in the snow, with the bull bison's kill zone in her scope. She squeezed the trigger. The bison jumped and then collapsed in a

RANDY BAILEY

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patch of snow as the rest of the herd slowly drifted away.

## LASTING MEMORIES

Christine tagged the bison, called Kerin to report her success, then returned to the outcropping to fetch the kids, who'd watched the entire hunt. The family rode out on their mules to begin the long process of field dressing and packing out the bull, but not before taking a few photographs to share with friends and other family members.

The couple and their kids worked together to remove the bison's cape to help the meat cool down, and then spent the rest of the afternoon removing the animal's massive head. By then it was dark, very cold, and time to head to camp.

**MULE MOBILITY** Christine Bailey, her husband, and their three children looked for bison near Gardiner last season in freezing temperatures. They rode the family's mules (left) onto Deckard Flats and searched for a bull. By late morning they had found an old one, past its prime, and Christine's shot was true, dropping the large animal in the snow (below). After she called the local game warden to report the harvest, the family got to work caping then butchering the bison. Making several trips, they ferried 600 pounds of meat back to their truck and then headed home to Stevensville.

The next morning, the Baileys faced even more work. They returned to the bison and finished field dressing the bull. They hauled roughly 600 pounds of meat, about twice what they were used to harvesting from a bull elk. "Growing up with my dad and the hunting ethic he instilled in me, we use everything we kill. My husband and I are instilling that in our kids." Randy spent the next three weeks butchering and processing the meat into steaks, sausages, ground meat, and jerky.

"For being an old bull, I was surprised how tender the meat is," Christine says. "It's very good."

Christine says she's had a lot of great deer and elk hunts over the years, but nothing can compare to the day she and her family rode mules onto Deckard Flats and hunted a bison, just as mountain men and American Indians had done 150 years before.

"I will always remember my dad watching over us," she says. "Being able to share that experience with my husband and my kids is something I will cherish forever."

# Monitoring Muleys

How FWP figures out mule deer population trends and harvest recommendations, and why biologists say now is the time to issue more B licenses in southeastern Montana. BY TOM DICKSON

It was five long years ago, but Dean Waltee vividly recalls what the winter of 2010-11 did to mule deer in southeastern Montana. "The record cold and snow we saw that year decimated mule deer populations in our region and throughout eastern Montana," says Waltee, at the time the Montana Fish, Wildlife & Parks biologist in Broadus. FWP Region 7's mule deer population, the state's largest, bottomed out in 2012 but has since rebounded to where it had been and beyond. Biologists attribute the increase to three consecutive mild winters, the replacement of older deer that died with younger, more productive deer, and a cutback by FWP in antlerless mule deer harvest. By spring of 2016, biologists estimated the population had grown to 47 percent above the long-term average. "We haven't seen numbers like this since the late 1990s," says John Ensign, FWP Region 7 wildlife manager.

Because of the rapid increase, FWP wildlife biologists say now is the time to start moderating the population growth by issuing more B licenses, or tags, which allow hunters to harvest additional antlerless deer. That will prevent muleys from overpopulating and eating themselves out of house and home.

Boosting antlerless harvest this fall is a smart move, say FWP officials. But to many hunters, issuing more B tags seems illogical. If deer numbers are increasing, they ask, why not let the population continue growing and then hold it at a high level year after year?

## CREATING CONFIDENCE

"We haven't always done the best job of explaining to the public how mule deer management works," says Waltee. "Basically, what we do is survey mule deer populations and estimate mule deer harvest, and then use that information to decide on appropri-

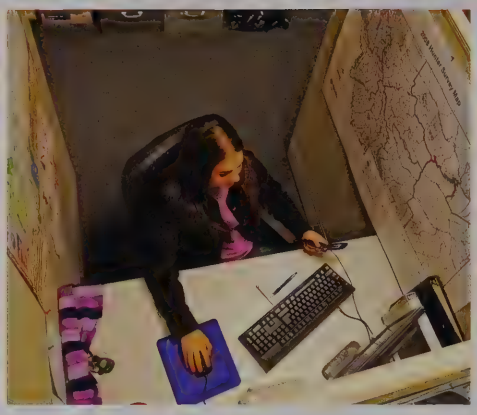
**MULTIPLYING** Mule deer populations in southeastern Montana (FWP's Region 7) were devastated by the brutal winter of 2010-11, reaching a low point in 2012. Since then, numbers have rapidly increased, as the relatively fewer remaining deer had plenty of browse, and three mild winters created abundant vegetation. FWP biologists say that now is the time to start harvesting more does, so herds don't overbrowse their habitat.

ate harvest levels for the upcoming fall hunting season."

Twice each year biologists count, from airplanes, the number of deer in large survey areas across Montana's mule deer range. "We can't go out and count every deer. That's literally impossible," says John Vore, chief of FWP's Game Management Bureau. "What we and many other states do is count deer in areas that represent the region's habitat, private and public land ownership, and public hunting access. That and other information tell us whether the overall mule deer population trend from year to year is increasing, decreasing, or staying stable."

Biologists fly over the state's 101 survey areas between December 1 and January 15 to determine the proportion of bucks, does, and fawns. They fly the same areas again from March 15 through April 30, when deer are concentrated in open areas during spring "green-up," to see how well fawns and adults survived the winter.

Hunters who don't see as many deer as biologists report may wonder if the surveys are focusing too much on private property, where deer numbers might be higher than on public land. Vore says that's not the case. In the state's main mule deer regions of central and eastern Montana, 41 percent of the



**HOW THEY KNOW** FWP tracks mule deer population trends by monitoring deer during aerial surveys in winter and early spring (above left), through winter phone surveys of hunter harvest (above center), and at hunter check stations (above right). Department biologists have also radio-collared and tracked more than 1,000 mule deer over the past several years to see how well the animals survive and where they travel.

survey areas are on public land or private Block Management Area property. "That's a higher percentage of land open to free public hunting than exists in the regions as a whole. So we are surveying representative areas accessible to all hunters," Vore says.

Still, isn't it possible that deer move far from the survey areas by the time the fall hunting season rolls around—which might account for why some hunters don't see as many deer as FWP says are out there? "We looked into that," says Justin Gude, chief of FWP's Wildlife Research and Technical Services Bureau. Biologists tracked radio-collared deer and found that one-third stay in survey areas during the fall, while the other two-thirds move away from the wintering areas only three miles on average. "Where we see the deer in the winter is pretty much where they will be next fall," says Gude.

> "All that information gives us confidence that we know what's going on with the mule deer population."

Another way FWP takes the pulse of mule deer populations is by monitoring hunter harvest at check stations and with winter phone surveys. "That harvest information almost always tracks with what we saw in the aerial surveys," says Gude. "If our winter and early spring surveys show an upward trend in deer numbers, we usually see more hunters with deer in the back of their pickups the following fall."

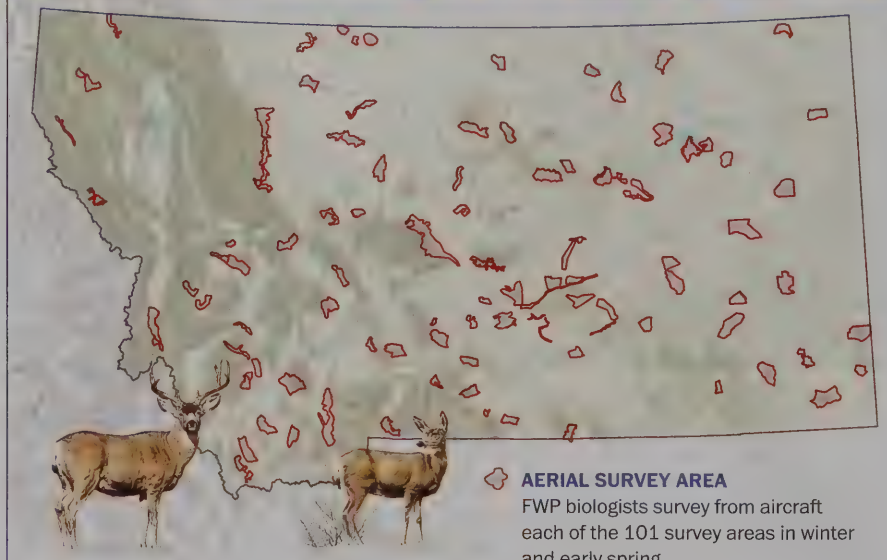
Biologists also assess deer numbers by regularly talking with landowners about wildlife populations they see on their property and by monitoring and addressing game damage complaints. What's more, over the past several years FWP has radio-collared and tracked 1,134 mule deer to see how well the animals survive and where they go. "All that information, added to the harvest data and aerial surveys, gives us confidence that we know what's going on with the mule deer population," says Vore.

## THE OVERBROWSING EFFECT

Even though FWP biologists know that mule deer populations in southeastern Montana are rebounding, how can they know for sure when to start increasing antlerless harvest to scale back that recovery? A 34-year-long experiment in the region provides answers.

Muley populations rise and fall naturally

### Biannual aerial surveys of mule deer populations



**AERIAL SURVEY AREA**
FWP biologists survey from aircraft each of the 101 survey areas in winter and early spring.

SOURCE: MONTANA FWP

**PARTS REPRESENTING THE WHOLE** It would be impossible to count all of Montana's mule deer. So FWP counts deer in survey areas representative of each region's habitat, private and public land ownership, and public hunting access. By adding survey information to harvest data, biologists know if a deer population is increasing, decreasing, or staying the same and thus can recommend appropriate harvest quotas.

CLOCKWISE FROM TOP LEFT: MONTANA FWP; ERIK PETERSEN; JOHN WARNER; HUNTER HARVEST PHOTOS FROM FWP GAME CHECK STATIONS; DONALD M. JONES; LUKE DURAN/MONTANA OUTDOORS

**GOT THEIR DEER** Mule deer numbers have been down in western Montana since the 1980s largely because of elk and whitetail population increases and conifer expansion. Still, hunters find muleys, as shown here. The 2015 statewide harvest of 14,733 mule deer was slightly below the long-term average. In Region 7, the number of mature bucks has been down in recent years. But the overall population is booming, which bodes well for buck hunting in the next several years.

## The "adaptive harvest management" approach

Since 1998, FWP has followed an "adaptive harvest management" (AHM) approach for mule deer in Montana. Like a similar process long used for waterfowl management, AHM is based on decades of research and experience and allows FWP to accurately detect changes in mule deer populations and respond quickly with appropriate hunting regulations.

FWP's AHM document—the agency's mule deer management "bible"—recommends restrictive, standard, or liberal harvests each year based on two main criteria: how the number of fawns per 100 adults each spring compares to the long-term average, and how the springtime deer population compares to the long-term average. Biologists also consider factors such as deer age structure, winter survival, buck-to-doe ratios, habitat conditions, and hunter preference and satisfaction.

"This year our Region 7 mule deer population was well above the long-term average, but fawn production wasn't quite high enough to trigger the full liberal harvest package," says John Ensign, FWP regional wildlife manager in Miles City. "To stay as true as possible to the AHM prescriptions while still proactively addressing burgeoning deer populations, we decided to issue 7,500 B licenses this year." ■

based largely on how weather and habitat conditions affect deer survival and reproduction. A major factor is the amount of forage (forbs, or wildflowers) and browse (shrubs) available to deer each year. When summer vegetation is lush, deer put on a thick layer of body fat to help them through the following winter. When plant growth is sparse, a hard winter can cause large numbers of malnourished deer to perish or, in the case of does, reabsorb developing fetuses.

Deer population extremes are a problem. When overabundant, mule deer overbrowse shrubs such as mountain mahogany and bitterbrush, which can take years to recover. "Because continual overbrowsing reduces the amount of browse through time, it slowly reduces the number of deer the habitat can sustain," says Waltee, now the FWP biologist in Sheridan. "That's what we're seeing in southwestern Montana."

Hungry deer also cause problems for landowners by raiding hay bales and grazing pasture. "Population extremes are always a problem for someone," says Waltee. "Too many deer, and landowners get mad. Not enough deer, and hunters get mad."

Wildlife biologists can use hunting regulations to moderate deer population extremes, but only if timed correctly. "Before 1982, our mule deer hunting regulations here in Region 7 were 'reactive,' meaning we would wait too long to increase antlerless harvest when populations were increasing," says Melissa Foster, FWP wildlife biologist in Baker. Foster explains that when a deer population increases naturally due to several years of abundant vegetation, it eventually exceeds the land's "carrying capacity," or ability to support that many deer. "It might seem that having a lot of deer is great for hunters, but in the long run it's not," she says. With less browse available, undernourished does produce fewer fawns, leading to depressed populations over the long term. "The land can't sustain a super-high deer population for extended periods," she says.

> "Invariably a too-high deer population leads to a crash."

The most striking example of this boom-bust effect came in the early 1970s. Mule deer numbers in Region 7 were skyrocketing because FWP had restricted antlerless harvest, even during years of abundant browse. In 1973, hunters harvested a record 19,335 mule deer bucks. During the next few years, FWP finally increased antlerless harvest, but by then the population was already dropping naturally, as mule deer found little left on the landscape to browse. Coming too late, the increased antlerless harvest accelerated the population decline. By 1976, the buck harvest had plummeted to just 3,498, a decrease of 82 percent. "That's a prime example of reactive harvest management," says Waltee. "In hindsight, we now see that the increased antlerless deer harvest came two years too late to prevent severe habitat stress and an extreme population decline."

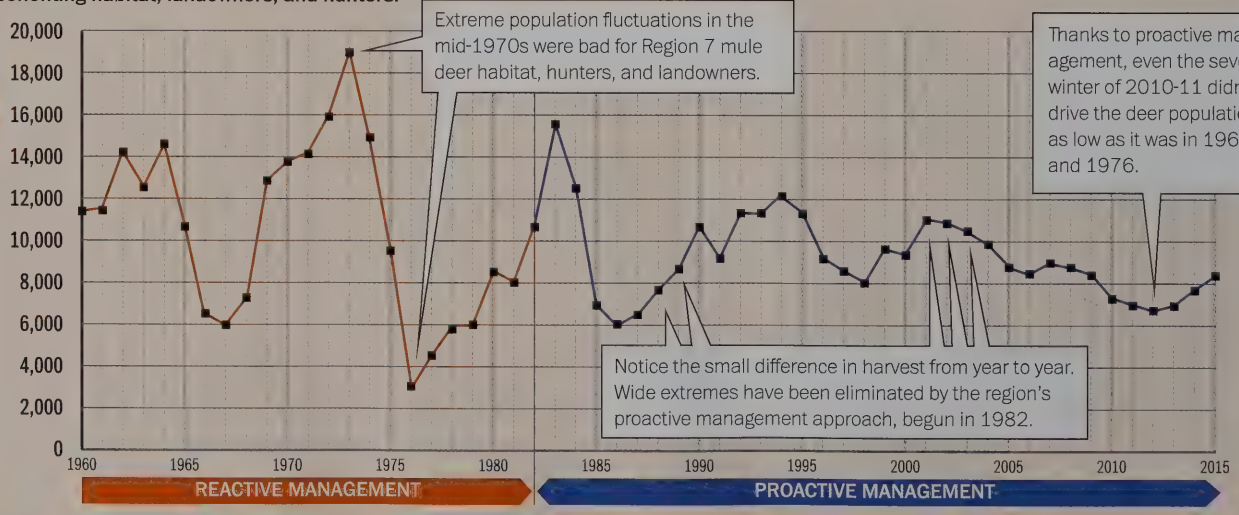
*Tom Dickson is editor of* Montana Outdoors.

### IRONING OUT THE EXTREMES

Starting in 1982, Region 7 made two major mule deer management adjustments. One was to change from setting seasons and issuing licenses for each of 35 different hunting districts to creating a regionwide season and issuing licenses valid across the region. "It's like we became one big hunting district," explains Ensign. Under this approach, biologists, hunters, and landowners working together can quickly increase hunting pressure in areas with high deer densities and decrease it in areas with too few deer. And they can make these adjustments during the deer season, rather than waiting a year to adjust regulations for the following season. "If a

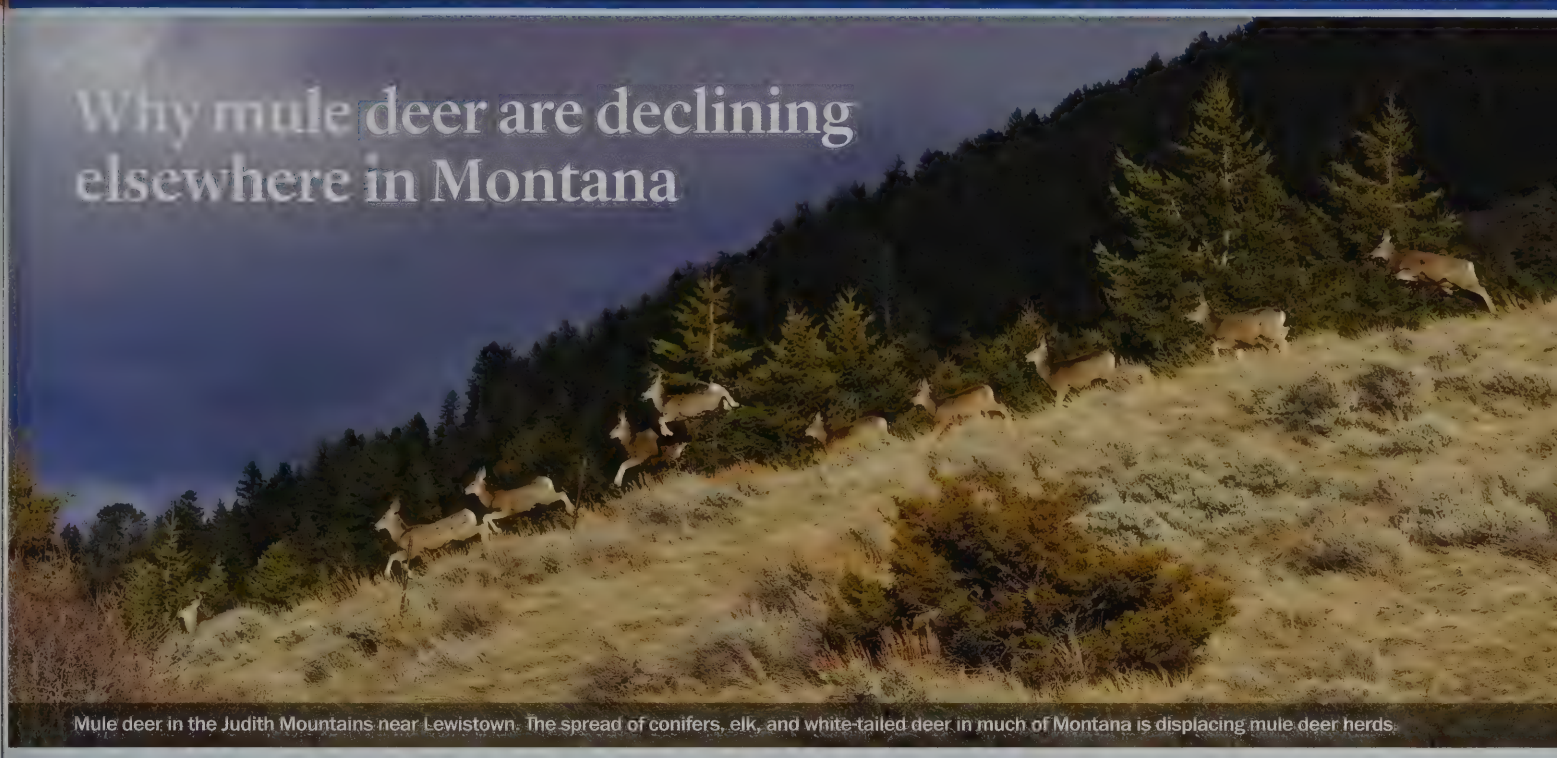
**NO MORE BOOMS AND BUSTS** **In the 1960s and '70s, Region 7 mule deer populations fluctuated widely. That's because FWP was increasing antlerless harvest too late to prevent overabundant deer from eating themselves out of house and home. The region switched from this "reactive" management approach to a "proactive" strategy in 1982. By increasing doe harvest *before* deer numbers get too high, FWP has ironed out population extremes, benefiting habitat, landowners, and hunters.**

Region 7
Mule deer
buck harvest
1960–2015




SOURCE: MONTANA FWP

# Why mule deer are declining elsewhere in Montana



Mule deer in the Judith Mountains near Lewistown. The spread of conifers, elk, and white-tailed deer in much of Montana is displacing mule deer herds.

While the mule deer population in southeastern Montana is booming, numbers elsewhere in the state—and throughout the West—remain lower than several decades ago. They will likely stay that way. The population decline stems largely from a decrease in quality habitat available to mule deer in central and western Montana caused mainly by:

**1. The spread of conifers:** Douglas fir, Rocky Mountain juniper, and other conifers have spread across mountainsides and foothills. The conifers outcompete the forbs, shrubs (such as mountain mahogany, antelope bitterbrush, and sagebrush), and young quaking aspen that mule deer eat. This "conifer expansion" has been caused by decades of fire suppression and reduced tree cutting on federal, state, and private lands.

**2. Competition from elk and whitetails:** Elk and mule deer share much of the same habitat. Though their diets don't overlap completely, an elk eats three times more than a mule deer and is better able to reach browse in deep snow. In much of Montana's prime mule deer country, elk numbers are now three or four times greater than they were in the 1980s, and they have taken over areas previously dominated by mule deer. For instance, in several hunting districts in southwestern Montana, winter elk counts have increased from a total of about 4,000 in 1980 to more than 17,000 in 2015. Mule deer numbers in those same hunting districts have declined by 64 percent.

Mule deer also face competition from white-tailed deer, which generally do better in areas altered by human development.

"The increase in conifers, elk, and whitetails in mule deer country is the new normal," says John Vore, chief of FWP's Game Management Bureau. "We'll never have muley numbers in western Montana like we did in the 1980s unless we can magically change all that and make everything like it was 40 years ago." ■

"The increase in conifers, elk, and whitetails in mule deer country is the new normal."

From Cottonwood Bench looking west toward the Snowcrest Range near Dillon, 1921. Nearly a century ago, the foothills of the Snowcrest Range were devoid of conifers, providing abundant sagebrush and young aspen for mule deer.

A recent photo shows how Douglas fir and other conifers have expanded across the range, due to lack of fire and tree cutting. The conifers outcompete the shrubs and forbs that mule deer eat, reducing population size.

CLOCKWISE FROM TOP: BARBARA TIMMS; LARRY DEARS; JOHN WARNER; MONTANA FWP; MONTANA FWP

landowner has too many deer, we can direct hunters to that property as soon as he calls," says Ensign. "We didn't have that kind of flexibility under the old system."

Region 7's other big deer management change was to begin issuing more B tags when fawn production and populations started taking off, rather than waiting until numbers reached a peak. "In the past, by the time hunters said, 'Jeez, you've got a lot of deer out here,' those populations had already stressed the habitat and were starting to decline," says Ensign. "Using this proactive approach, we increase harvest a few years before populations would otherwise hit their peak. That way vegetation stays healthy, fawn production remains steady, and we reduce those wide population oscillations."

The proactive approach has ironed out the extreme mule deer population highs and lows across Region 7 (see graph, page 24). "That in turn allows hunters to predict and plan for the coming years, and it also reduces game depredation on farms and ranches," says Ensign. He notes that landowner complaints in Region 7 have steadily declined over the past three decades to just 20 percent of what they were in the early 1980s (see graph below).

Vore says that Region 7's proactive management approach could work in other regions, and for whitetails too. "For instance, many whitetail hunters in Region 1 (northwestern Montana) don't want us to issue B tags until the population is at its peak," he says. "But by then it's too late, and there are too many deer. That leads to the crashes we've seen in the past."

To prevent a collapse in Region 7, FWP is increasing the number of B licenses available this fall, based on an "adaptive harvest management" process the department uses for deer management (see sidebar, page 23). In July, the Montana Fish and Wildlife Commission approved selling 7,500 regionwide B licenses for 2016, up from zero just two years ago. The commission will also allow the region to issue up to 11,000 B licenses in the future if surveys show continued growth in fawn production, fawn recruitment (young deer that survive their first winter), and overall deer numbers. Hunters usually fill about half of those tags, Vore adds.

Hoping that high deer numbers can be sustained, some hunters wonder if FWP is acting rashly. "The belief is that we can 'protect the herd' by not harvesting does," says Waltee. "But invariably a too-high deer population leads to a crash. There's simply not enough habitat to support high deer populations year after year."

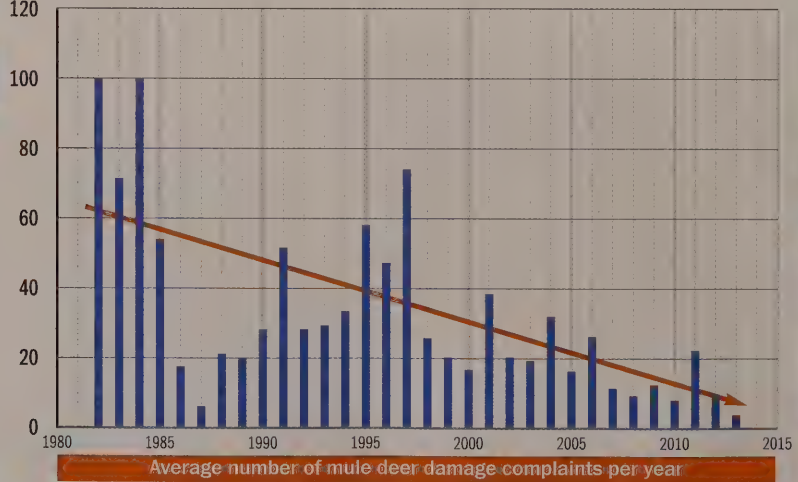
Such a plummet is likely if Region 7's burgeoning mule deer population continues rebounding at the current pace. "Having lots of deer is great for hunters in the short term, but already we're seeing habitat degradation," says Vore. "Within a year or two, those increasing numbers of deer will be back hammering the habitat again, and no one wants that."

**WELL DONE** Hunters hoping for more moments like this will benefit from proactive mule deer management that keeps herds and the landscape healthy and sustainable.

LEFT TO RIGHT: LISA DENSMORE BALLARD; ERIK ARGOTT; DONALD M. JONES

**FEWER PROBLEMS FOR RANCHERS** Since 1982, FWP has reduced mule deer population overabundance in Region 7 by increasing doe harvest at the right time. One result: Depredation problems in southeastern Montana have declined to just a fraction of what they were 40 years ago. "Our challenge is to continue using this proactive management approach, which to some may seem counterintuitive," says Dean Waltee, FWP wildlife biologist. "Often hunters don't want us to issue more B licenses until the deer population is obviously too high. By then it's too late, and both landowners and the habitat are inundated by deer."

Region 7
Landowner complaints about mule deer
1982–2013




SOURCE: MONTANA FWP

The mule deer population in Region 7 (southeastern Montana) is young, as abundant yearlings have replaced older deer that died in the winter of 2010-11. If these fertile deer reproduce at current rates, they could overwhelm the land's carrying capacity and cause depredation problems for ranchers and farmers. FWP is taking steps to keep the population from growing too big.

# Coming Through

BY GABRIEL FURSHONG

I went to sleep with a sense of foreboding and woke before the alarm. The wintry morning had crept through the walls of our one-room cabin. I could see my breath drift toward the timbered ceiling. After starting a fire in the iron stove, I pressed my nose to the window, a frosted frame of blackness yielding nothing of the world beyond. The moon had waned to a sliver, and the steep slopes of the Rocky Mountain Front were perfectly hidden.

I felt a rush of anxiety.

My wife rolled over contentedly, her brown hair barely visible beneath a goose down quilt. I almost never hunt alone, especially in the impenetrable dark of an early morning like this one, but I had promised to let her sleep.

As I considered my options, the words of Jack Turner came to mind. A Wyoming climbing guide and writer, Turner laments our modern reluctance to embrace what he sarcastically calls "the cold, scary dark." He equates the thrill of walking in wild country at night with swimming in an ocean that has sharks, challenging his readers to be at home in places that carry some degree of danger.

I squared myself tentatively against his dare, dressed quickly, and stepped into the cold. White stars wheeled in a sky that stretched unchangeably black to its very corners. Too dark, I thought, to ever light up again. I craned my neck upward and dizzily rotated 360 degrees, trying to absorb the array from all angles while stumbling toward my frozen vehicle.

The diesel was nearly gelled at 15 below, but the engine murmered sluggishly to life after several turns of the key. A country station clicked on, the only signal that reached this far west of Choteau, into the icy truck cabs of ranchers who begin every day before dawn. The music wasn't meant for me, but I happily borrowed it.

On the main road that parallels the Teton River, I imagined a gallery of animal eyes watching as my rumble of headlights passed by. I scanned for a jag in the road that marked my parking spot, somewhere ahead in the spherical convergence of high beams. Before long, I yanked the car to the shoulder and took a shaky breath. It was still hopelessly dark, so I moved quickly to avoid second thoughts.

I stacked five 150-grain shells into my .30-06. With the aid of a headlamp, I scurried under a barbed-wire fence and began to march with a forced confidence. But the tunnel of lamplight provided a new and unexpected discomfort, casting everything beyond its edges into further invisibility.

Just as a tall fence makes unseen neighbors more suspicious, the artificial light allowed me to exaggerate the potential movements of indiscernible animals. A grizzly bear is the local equivalent of Turner's shark, and I could easily imagine one of these 650-pound creatures, on the eve of hibernation, hungrily scavenging for food to put on more fat.

Then I thought, What would Turner say in such a moment?

Like a child at the edge of a high dive, I stood stock-still and clicked off the lamp. Slowly, my pupils expanded. Soon I could see my gloved hands and the laces of my boots. I looked up at the Milky Way, a trace of infinite light, like a game trail barely visible in dense brush.

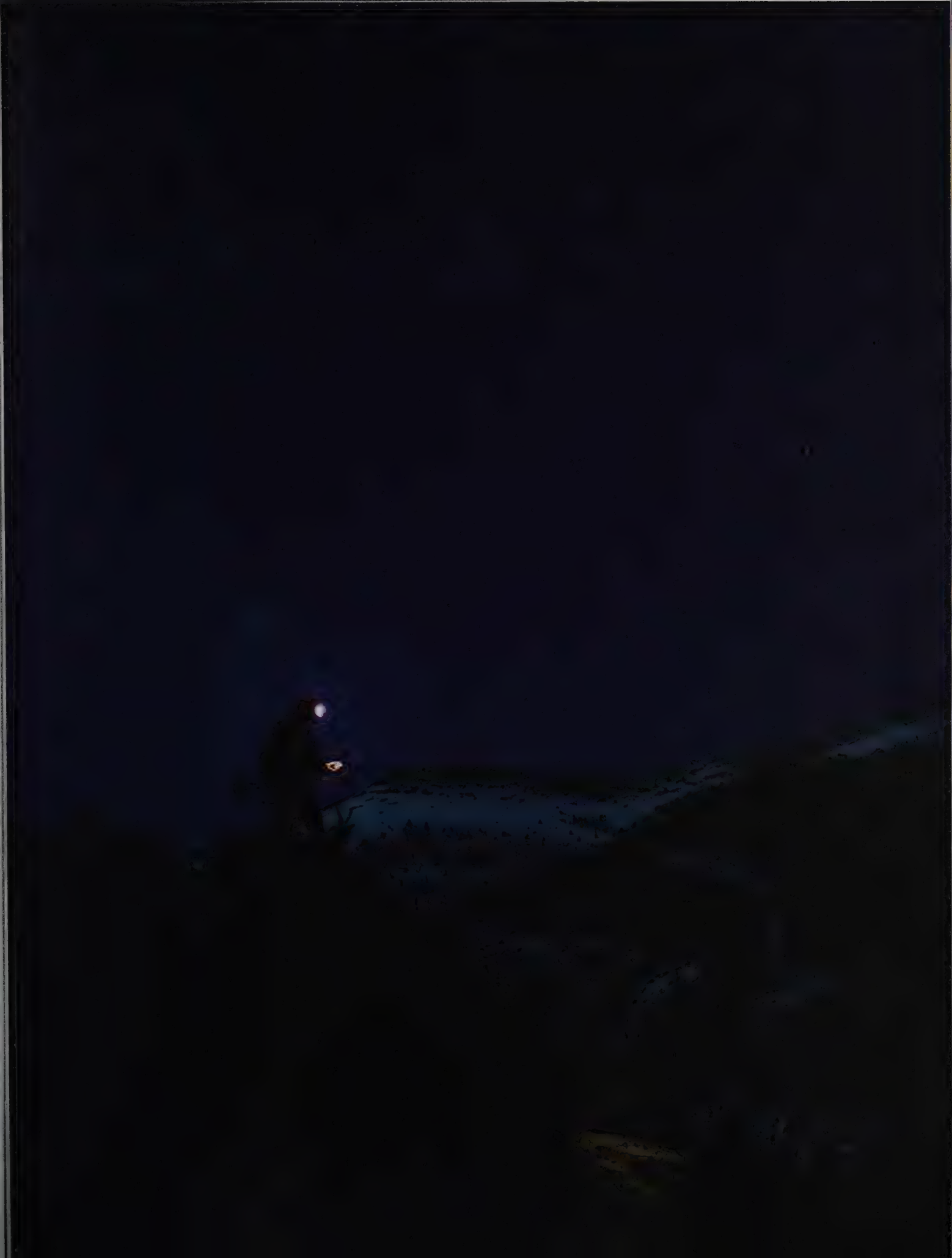
But what of my immediate surroundings? The horizon was suddenly apparent as a black mass below the star-speckled night sky. I walked toward it. Forty minutes later, I squatted on a narrow pine ridge, panting. The inhale and exhale of freezing air seemed impossibly loud on the windless ridge, and I wondered who or what might be listening.

My watch read 6:48 a.m. I let my breath fall into a rhythm and waited, squinting into the murky void. A half hour passed grudgingly before the night's firm grasp began to weaken. The black sky turned deep blue, and a world of things began to emerge in ten-minute intervals: shapes, textures, colors.

Downslope, a copse of limber pine appeared, composed of indistinguishable individuals, like a cluster of shadows. No details yet. No branches or cones. Then, each tree divided into whorls. Next, each bough bristled with needles. Finally, each tree became unmistakably, sharply green: a deep evergreen humming with morning light.

Newly golden foothills climbed toward the mountain front, each casting a thin shadow upon the other, like cobbled steps leading to a temple. Above them, the gray face of granite cliffs standing 9,000 feet high reflected pink and orange. Their rugged spines stretched beyond sight to the north and to the south. Behind those lines, rocky ridges stacked westward in waves, each waiting its turn to crash upon the sun-drenched hills, where I rested with eyes wide open, having recently come through darkness.

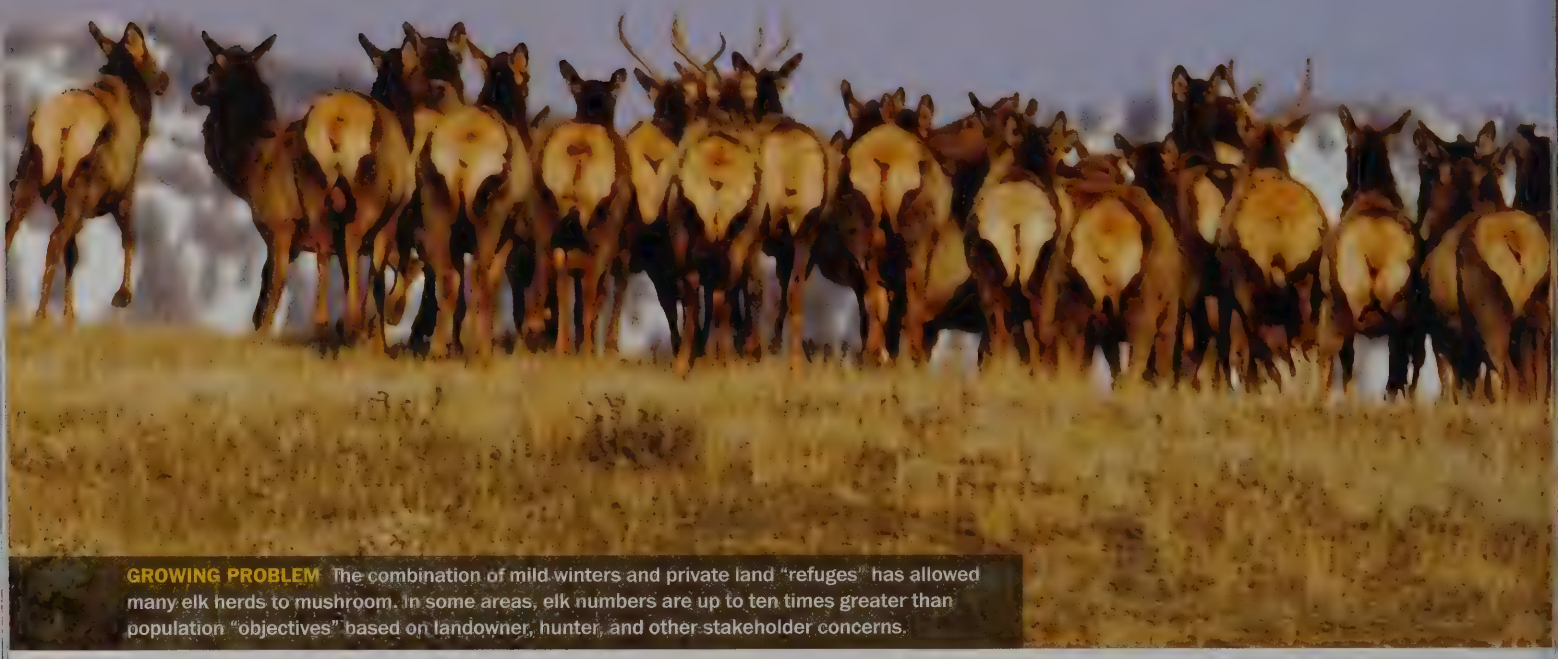
*Gabriel Furshong of Missoula is deputy director of the Montana Wilderness Association.*



Q&A

# Shoulder Season

BY MONTANA FISH, WILDLIFE & PARKS



**GROWING PROBLEM** The combination of mild winters and private land "refuges" has allowed many elk herds to mushroom. In some areas, elk numbers are up to ten times greater than population "objectives" based on landowner, hunter, and other stakeholder concerns.

In February 2016, the Montana Fish and Wildlife Commission authorized elk "shoulder seasons" in 43 Montana hunting districts, creating some of the longest elk hunting opportunities in state history. Here's what hunters and landowners need to know about these extensions to Montana's general firearms season.

**Q. What are shoulder seasons?**

**A.** They are firearms seasons outside the regular five-week general firearms elk season, mostly restricted to private land. Shoulder season dates differ by hunting district. This year some began as early as August 15 and others will continue until February 15, in some cases creating six full months of hunting opportunity (see page 33).

Depending on the specific hunting district, hunters can hunt during a shoulder season using their general elk license or elk B license (the latter obtained through a limited drawing—the application deadline for which was June 1—or over the counter).

**Q. Why are shoulder seasons necessary?**

**A.** There are far too many elk in many parts of Montana. This has caused problems for landowners as overabundant elk knock down fences and consume haystack and pasture meant for livestock. Concentrated elk also increase the risk of brucellosis spreading to cattle in areas where the disease is prevalent. In some hunting districts, elk numbers have grown to more than ten times higher than "objectives"—levels based on landowner tolerance, hunter interests, and other factors.

Shoulder seasons will help the agency comply with state statutes requiring it to manage elk populations to objectives. The seasons will also meet a mandate by Governor Steve Bullock for FWP to improve relationships among the department, landowners, and hunters.

**Q. How will shoulder seasons help reduce elk numbers?**

**A.** They will help by giving hunters more time to find and harvest cow elk, and by moving herds around the landscape before and after the general season—like in late August when elk often bunch up on irrigated

ERIK PETERSEN

# Basics

What hunters and landowners need to know about FWP's unprecedented attempt to reduce extremely overabundant elk populations in 43 Montana hunting districts.

fields—making the animals more vulnerable to hunters.

The shoulder season harvest will add to, not replace, the general season harvest. Even with shoulder seasons, the harvest in targeted hunting districts must also increase during the general season to sufficiently reduce elk populations.

Also, shoulder seasons won't work to reduce elk numbers unless landowners, hunters, and FWP employees work together.

**Q. Why don't landowners just allow more public hunting access to reduce elk numbers?**

**A.** Many do. But often elk leave ranches that are open to hunting during the five-week season. The animals find refuge on nearby private lands that don't allow public hunting. After the general season ends, elk then return and cause problems on ranches that had allowed public hunting.

**Q. Where will shoulder seasons occur?**

**A.** Most of the 43 hunting districts are in central, south-central, and southwestern Montana (see map and list on page 33). Those areas have exceptionally high elk numbers that FWP has been unable to reduce using other population management tools, such as allowing more B licenses during the regular five-week season.

**Q. What did FWP learn from the pilot shoulder season it set up last winter in four hunting districts?**

**A.** The department learned that shoulder seasons can work to reduce harvest. For instance, in HD 449/452 and HD 446, hunters harvested more elk last season than in any previously recorded harvest there. The increase was almost entirely due to greater harvest of antlerless elk in both the general season and the pilot shoulder season.

The pilot showed that harvest was highest in hunting districts where landowners cooperated and hunters could use their general license. Success was lowest in those areas where hunters needed special licenses to hunt and landowners were less likely to allow public hunting.

FWP also learned that there was enormous interest from hunters. The FWP office in White Sulphur Springs, the nearest town for three of the four pilot hunting districts, received 20,000 phone calls and thousands of visits.

Though FWP staff there and elsewhere did their best to connect hunters with landowners willing to provide access, it still wasn't easy to put the two together. Hunters participating in the 2016-17 shoulder seasons will need to develop relationships with landowners to secure permission, just as they do during the regular season.

Hunting during the pilot shoulder seasons was often hard due to cold and snow,

**MORE DAYS AFIELD** In addition to the goal of reducing elk numbers to lessen landowner depredation problems, shoulder seasons will provide hunters with additional weeks and even months to harvest a cow elk.

and most landowners allowed only nonmotorized access and retrieval. Hunters expecting an "easy" hunt were disappointed, while those prepared to hike long distances in winter conditions had the highest success.

Initial participation among landowners was high, though having public hunters on their property for ten additional weeks became a hardship for some. Hunters should do everything they can not to disrupt landowners' operations. In addition to securing permission early, shoulder season hunters should follow property owners' rules, hunt ethically, and show landowners they appreciate the additional hunting opportunity.

**Q. Are shoulder seasons like game damage and management season hunts, with hunter rosters?**

**A.** No. Game damage hunts and management seasons are used to reduce elk numbers on and disperse herds off *specific properties* that allow general season public hunting but still have severe depredation problems. Hunters who apply in lotteries to be on the rosters are notified at short notice when and where they can hunt.

Shoulder seasons, which do not have rosters, are meant to reduce elk numbers in *entire hunting districts*. Shoulder seasons are printed in the hunting regulations, allowing hunters to plan outings far in advance. Hunters will need to locate and gain permission from landowners beforehand, just as they do during the general season.

Another difference is that game damage and management season hunts are often relatively easy because landowners can direct hunters to concentrations of elk causing problems, often near roads. Hunting during shoulder seasons will be just as hard, or harder, than during the general season.

**Q. Will FWP help put hunters in touch with cooperating landowners?**

**A.** FWP has hired "elk hunt information coordinators" for Regions 2, 3, 4, and 5 to provide shoulder season information to hunters and landowners. Sometimes an elk hunt information coordinator will be able to connect hunters with landowners seeking help with elk reductions, but hunters should not count on that. Phone numbers for the coordinators are on the FWP website.

**Q. Don't shoulder seasons allow some landowners to outfit for bulls and then use public hunters to come in later and reduce cow elk numbers?**

**A.** That's an issue, even though most elk hunters are more than happy to harvest a cow elk. Still, to address concerns that shoulder seasons might be misused, FWP has made them "performance" based. This means that a shoulder season will continue in a hunting district only if more than half the cow and bull elk harvest takes place during the regular archery and firearms seasons. This performance criterion is not directed at individual properties but rather across entire hunting districts. Those who have restricted public access during the general season and want to use the shoulder season for elk reductions will likely need to allow more access for both cow and bull elk during the general season to meet hunting district harvest goals. Landowners unwilling to do so could create more elk depredation and increase the likelihood of brucellosis on their own and their neighbors' properties.

**Q. What should hunters expect if they hunt during a shoulder season?**

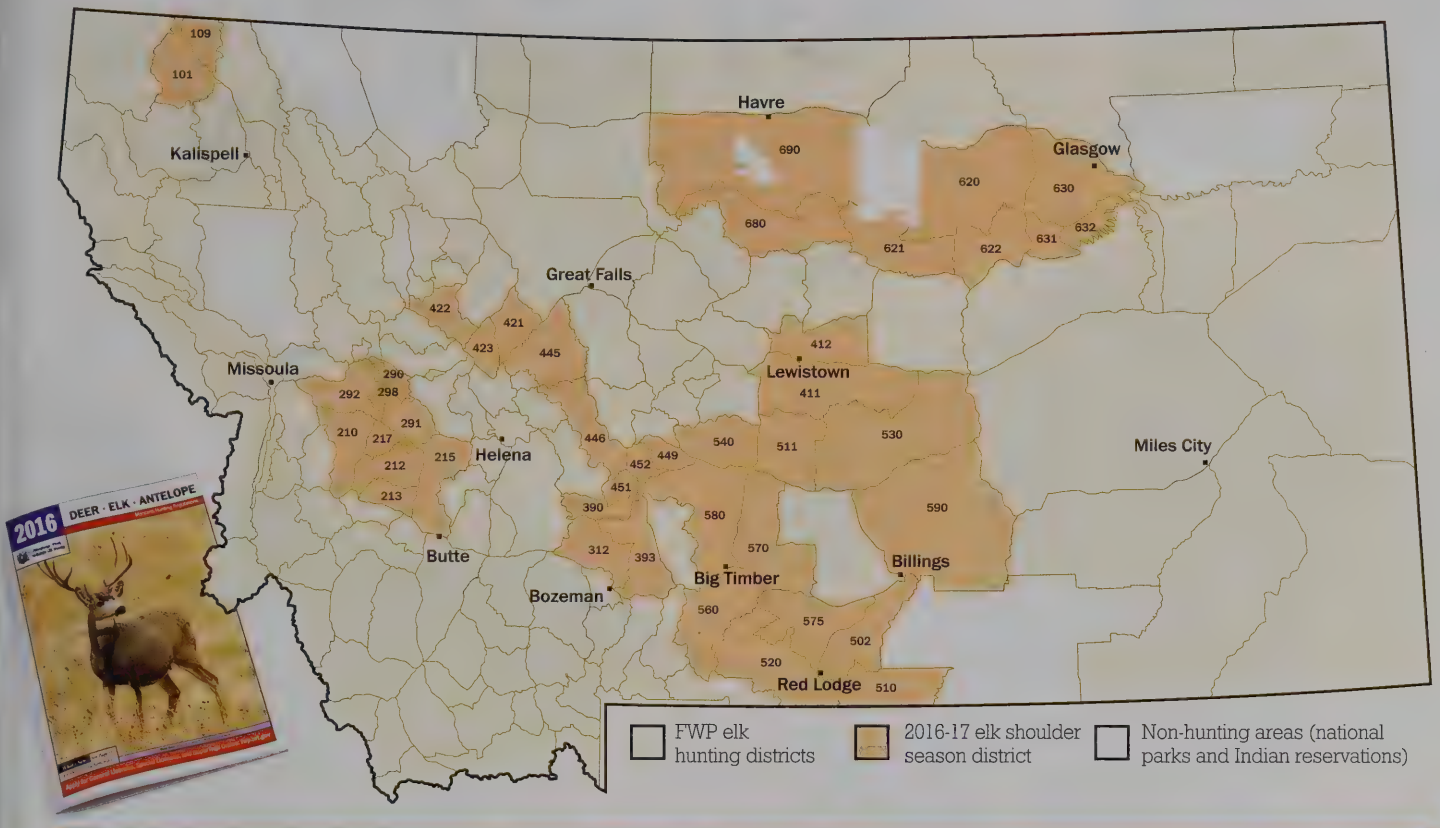
**A.** Expect it to be like the general season, though, in most cases, shoulder seasons will be on private land only.

- Don't expect shoulder seasons to be like game damage hunts. There are no rosters or arranged landowner contacts.
- If hunting in winter, prepare for cold, difficult conditions. If hunting in an early shoulder season, prepare for hot weather.
- Don't expect to hunt on public land.
- Don't expect to use motorized vehicles.
- Do expect to enjoy extra days afield hunting elk in Montana's great outdoors.

*For more information on shoulder seasons, visit fwp.mt.gov.*

PHIL FARNES

# 2016-17 Elk Shoulder Seasons







| Region | Valid in Hunting District(s) | License Type | Shoulder Season Dates |
|---|---|---|---|
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| 2 | HD 210 | B License by drawing only | Aug. 15–Jan. 1 |
| | HD 212 and 213 | B License by drawing only | Dec. 1–Feb. 15 |
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| | HD 292 | B License by drawing only | Aug. 15–Oct. 21 |
| 3 | HD 312, 390, and 393 | OTC B License | Aug. 15–Sept. 2, Nov. 28–Jan. 1 |
| | HD 390 and 393 | General Elk License | Nov. 28–Jan. 1 |
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| | HD 511 and 530 | B License by drawing only and General Elk License | Aug. 15–Sept. 2, Oct. 17–21, Nov. 28–Jan. 15* |
| 6 | HD 680 and 690 | B License by drawing only | Dec. 15–31 |
| | HD 620, 621, 622, 630, 631, and 632 | B License by drawing only | Dec. 15–31 |

*Some licenses are not valid in all hunting districts or for all shoulder seasons. See hunting regulations.

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When it comes to Montana's highly coveted SuperTags—licenses that allow lucky winners to hunt a trophy big game animal nearly anywhere in the state—I've been lucky.

Not in drawing a SuperTag. That's never happened and probably never will. But as part of my job I get to call the lottery winners and tell them the good news. "Hello," I say, "this is Ron Aasheim with Montana Fish, Wildlife & Parks. I'm about to make your day."

It's one of the most enjoyable things I do at work all year.

Montana has eight SuperTags, one each for moose, bighorn sheep, mountain goat, antelope, elk, deer, bison, and mountain lion. For $5, hunters buy a chance at winning one of these special licenses. Each summer we hold a lottery and draw one SuperTag for each species. The license is good in any Montana hunting district—including the state's legendary trophy areas. We use the revenue to enhance hunting access and boost FWP game law enforcement.

Both residents and nonresidents may buy unlimited numbers of the lottery chances at $5 each. Most buy just one or two chances, but some hunters improve their odds with multiple purchases. Though that gives people with more money an advantage, many past winners have bought only one $5 ticket.

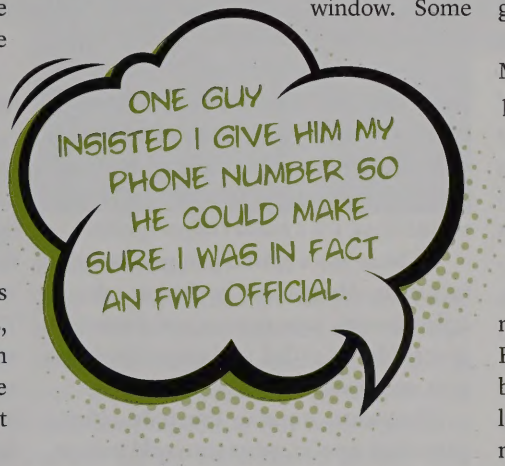
The odds of winning range from about 1,000:1 for the mountain lion SuperTag to up to 20,000:1 for the bighorn sheep SuperTag. As you can imagine, it's a big deal to get drawn for any of them.

Most hunters I call respond the way you'd expect: "You gotta be kidding me!" A few admit they forgot they'd even put in for the license and are surprised to be reminded they entered, much less actually won. A fair number truly believe I'm pulling their leg.

One guy insisted I give him my phone number so he could make sure I was in fact an FWP official. When he called me back after confirming my identity, he said, "You S.O.B.! I thought for sure you were one of my buddies playing a joke." Another hunter I called was completely floored by the news. "Wait a second," he said. "I've got a bottle of whisky here and I need to pour myself a drink."

You'd think that after a while I'd get jealous of these lucky hunters. But that's not the case at all. It's fun hearing them whoop and laugh and even gasp at the news. I feel like the guy who delivers that big Publishers Clearing House sweepstakes check to some unsuspecting family.

It's not just SuperTags that get hunters flustered. Winning any of the regular big game lottery permits can change someone's life, or at least their hunting season. Hunters who draw a mountain goat or bighorn sheep permit, for instance, might have to throw their deer and elk hunting plans for that fall out the window. Some hunters spend months training for these hunts and then weeks or even more scouting and hunting. After our son Erik drew a mountain goat tag for the Spanish Peaks, he hiked in five to ten miles eight different times before the season even started. We spent hours talking about his upcoming hunt, and I remember asking him why he put in so much effort. "Because it's an opportunity of a lifetime, Dad," he said.




As highly desired as these big game permits are, winning one can turn out to be a matter of "Be careful what you wish for." Some hunters who've drawn a prized either-sex elk tag for the Elkhorn Mountains have told me they ended up calling it the "Permit from Hell." They say their buddies pressure them (or they pressure themselves) to pass on smaller bulls and keep hunting—week after week—hoping to shoot something for the record books. After the season ends, parents of younger Elkhorn permit holders have told me, "Thank God that's over."

On the other hand, some permit winners hope the hunt never ends. One hunter from Manhattan (Montana) who drew a moose SuperTag happily put 3,000 miles on his truck during scouting trips across western Montana. Another spent four months scouting seven hunting districts for bighorn sheep, eventually looking at 100 different rams before deciding to pull the trigger on one in the Flint Creek Range. One nonresident SuperTag winner spent four weeks hunting across the state trying to get the perfect bull but never succeeded. He told me he finally realized that what was most important about his adventure wasn't the size of the bull he shot but the friendly people he met and the great places in Montana he visited.

Some stories are especially moving. Larry Martin, of Rock Creek, drew a moose SuperTag while battling cancer. Though weakened by treatment, Larry hunted hard that fall and eventually shot a trophy moose. He later told me, "When I was in treatment, that moose license was the light at the end of the tunnel that kept me going."

Several years ago I learned that the mayor of East Helena, a beloved man named Ed Murgel, had terminal brain cancer. His brother, Randy, told me that for most of Ed's life he'd put in for an Elkhorn bull tag and had never drawn one. Randy asked if we could dummy up a permit to give to his brother. So we printed one out with his name on it and sent it to him. Later we learned that Ed had asked to have it pinned up on the wall in his hospital room where he could see it during his last few days. His family buried him with the permit pinned to his shirt.

Stories like that reaffirm for me the importance of what we do at FWP. Public controversies over how the department manages fish and wildlife occasionally cause me to lose perspective on what's most important about FWP's mission. Then I talk to a Larry Martin, or learn about the last wishes of a devoted elk hunter, and I'm reminded that those of us who work here have a special privilege, opportunity, and responsibility to manage the wildlife that mean so much to so many people. That's a real honor, and it serves as a reminder of what an amazingly wildlife-rich state we live in. And how lucky we are to hunt in such a place—whether we draw a special permit or not.

*Ron Aasheim is the longtime administrator of the FWP Division of Communications and Education.*

PHOTO ILLUSTRATION BY LUKE DURAN/MONTANA OUTDOORS

# Prepare (again) to be humbled

by Bruce Auchly

Before long, it will be that time of year again when a bird with a brain no bigger than a lima bean outfoxes, outsmarts, and generally flummoxes humans, the supposedly superior species.

I'm talking about the pheasant season, or course.

The pheasant forecast this year is for generally good—though not excellent—bird numbers. Pheasant country saw a mild winter and spring, plus early summer moisture that came at just the right time.

Weather and habitat are key to pheasant numbers. But when populations are down, people blame the usual suspects: foxes, coyotes, hawks, and a hunting season that, to some, lasts too long. Upon closer examination, however, those factors don't make much of a dent in the overall pheasant population.

But before we get into that, some basic biological facts:

Ring-necked pheasants are not native to Montana. They evolved in Asia, and were introduced here in the late 1880s and early 1900s from stock already introduced in Oregon, Washington, and Utah.

That pheasants are an exotic species is not a big deal for most people. Lots of other well-liked Montana game species didn't evolve here either, like brown trout, Hungarian partridge, walleye, and smallmouth bass. It's a matter of perspective.

Of Montana's upland game birds—also including Hungarian partridge, sharp-tailed grouse, sage-grouse, and mountain grouse (dusky, ruffed, and spruce)—pheasants are the most popular with hunters.

Pheasants are also the only upland game bird species, other than wild turkeys, with a ban on harvesting females. Hunters may not legally shoot a hen pheasant.

Many people think the law helps pheasants. It doesn't. Study after study has shown that hen hunting does not harm pheasant populations. Pheasants are short-lived birds. The average annual mortality with or without hunting is 60 to 70 percent. That means a percentage of hens each autumn is surplus to maintaining the next year's population. And a surplus can sustain hunting without hurting the population.

It's habitat, not hen hunting, that makes or breaks a local pheasant population. A stubble field stretching to the horizon will hold few, if any, birds. Neither will a mountain forest.

Good pheasant habitat has diverse cover types. The rule of thumb is pheasants in creek bottoms and in Conservation Reserve Program grasslands, with sharptails up in the foothills.

Wherever found, good pheasant habitat includes thickets to provide shade in summer and shelter from winter's wind-driven snow; woody plants, especially with thorns, for protection from predators; and weedy patches for roosting or loafing. Throw in a nearby grain field for food, some green vegetation, and a water source. Then connect everything with heavily vegetated fencerows, ditches, and field edges for travel lanes.

The other big factor is how spring weather affects egg production and chick survival.

Conditions for nesting and brood (chick) survival vary widely depending on the habitat and localized weather. A cold, drenching rain that kills newly hatched chicks in one area might be a harmless drizzle 50 or even five miles away.

If chicks have a good hatch and good survival, especially a few years in a row, an area will provide some great hunting.

With the combination of diverse habitat and favorable late-spring weather, pheasants will survive predators and bad winters. The birds would even survive hen hunting (if hunters and landowners would ever allow it). But that's a discussion for another day.

Right now it's time to start thinking about the pheasant hunting season—and how to outwit those sneaky rascals.

*Bruce Auchly manages the FWP Regional Information and Education Program in Great Falls.*

ILLUSTRATION BY E.R. JENNE

# Antelope bitterbrush

*Purshia tridentata*

**By Kathy Lloyd**

JANE SHELBY RICHARDSON

If you have hunted or hiked through Montana's prairies or mountain foothills, you have no doubt walked among bitterbrush, one of the state's iconic shrubs. This time of year, especially, it's worth paying attention to bitterbrush, because it's one of the most important winter foods for prairie and foothills big game species.

### Identification

Bitterbrush, a slow-growing deciduous shrub in the rose family, grows from two to more than six feet tall. The small, inch-long leaves are wedge-shaped with three lobes, green on the upper surface and appearing gray-green on the underside because of dense hairs.

Long taproots that reach as far as 18 feet down into the soil allow the plant to draw moisture from deep underground in the semiarid environments where it grows.

The small flowers of bitterbrush are yellow and very fragrant, helping to attract insect pollinators needed to perpetuate the species. Bitterbrush blooms early, while the leaves are just starting to emerge, and paints an otherwise drab landscape in a wash of brilliant yellow. In central Montana, where I live, the flowers are gone by mid-June, after which the small, three-lobed leaves become the shrub's most distinguishing feature.

### Range

Bitterbrush ranges across 340 million acres of western North America from British Columbia to northern Mexico and throughout the Rocky Mountains and Great Basin. The shrubs grow most commonly on well-drained soils at 3,000 to 10,000 feet. In Montana, bitterbrush is usually found with bluebunch wheatgrass, needle-and-thread grass, Idaho fescue, and big sagebrush.

**Scientific name**

***Purshia*** refers to F. T. Pursh, a German American botanist who originally described this plant. The Latin word ***tridentata***, meaning "three-toothed," refers to the three lobes on the plant's leaves.

### Wildlife value

Antelope bitterbrush (also known as buckbrush) is browsed by deer, elk, antelope (hence the name), moose, bighorn sheep, and domestic livestock. Pronghorn and mule deer especially rely on the shrub to survive winter. Rodents such as deer mice and kangaroo rats browse bitterbrush leaves and eat the plant's seeds. As with big sagebrush, large tracts of bitterbrush act as the prairie's "forests," trapping moisture and providing shelter for rodents, songbirds, sage-grouse, mule deer, and pronghorn in the dry, windswept environments.

At Mount Haggin Wildlife Management Area near Anaconda, selective logging is opening up areas to sunlight and encouraging bitterbrush growth for mule deer. "Bitterbrush is highly susceptible to shading," says FWP Butte-area wildlife biologist Vanna Boccadori. "Projects that remove conifer overstory are important for bitterbrush conservation."

### Cheatgrass

Cheatgrass, an invasive, non-native annual, is spreading rapidly in bitterbrush and sagebrush habitats. Cheatgrass invasion has increased the amount of fuel in prairie environments. Though bitterbrush is adapted to minor fires, it cannot endure the more frequent, high-severity fires caused by increased fuel loads. As a result, some vegetation studies have shown that cheatgrass outcompetes bitterbrush after major wildfires.

### Historical notes

Bitterbrush had many medicinal uses among Native Americans. An infusion of the root was consumed for lung problems and coughs. The dry, ripe fruits were used to induce vomiting. Members of some Indian tribes used the leaves as a poultice for skin problems, a general tonic, and a treatment for gonorrhea.

Some tribes used the outer seed coat to produce a purple dye for staining items made of wood. Tribes living where trees were sparse made arrows from bitterbrush wood. Some Indians also chewed bitterbrush leaves to bring good luck during hunting. Indians, trappers, and settlers all used bitterbrush branches as firewood in areas with few or no trees.

Bitterbrush is one of 31 plant specimens collected in Montana by the Corps of Discovery that still survive and are housed in the Lewis and Clark Herbarium at the Academy of Natural Sciences in Philadelphia. Meriwether Lewis collected his bitterbrush specimen near Ovando in what he called the "prairi of the knobs."

*Kathy Lloyd of Helena recently stepped down after volunteering for 20 years as president of the Kelsey Chapter of the Montana Native Plant Society.*

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## PARTING SHOT

**MORE WHERE THESE CAME FROM** Elk numbers in central Montana are booming. See page 30 to learn how FWP is using "shoulder seasons" in 43 hunting districts to decrease overabundant populations by providing up to six months of hunting opportunity. Photo by Lisa Densmore Ballard.

Montana Fish, Wildlife & Parks

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